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SOAP

and Chemical Specialties

formerly SOAP AND SANITARY CHEMICALS

On this issue...

selection of soap perfume
not all a matter of cost

* * *

booming specialties open
new markets for glycerine

* * *

every's 75th anniversary
and soap's sales lusty

* * *

custodial training: New
rubber selling approach

Cover photo . . . New glass aerosol
for "Evening in Paris Perfusion" of
Bourjois. Maryland Glass bottle filled
by Continental Filling, valve and cap
by Risdon, gold foil label by Foxon.



1-5

Available for Immediate Delivery!

SOLVAY

Reg. U. S. Pat. Off.

Flake • Small Flake • Solid

CAUSTIC POTASH

WHITE in color!

LOW in turbidity!

LOW in Iron!

See For Yourself why SOLVAY Caustic Potash is *tops in value!* Send for FREE test samples and make your own comparison tests with the brand you're now using.

SOLVAY's industry-wise Technical Service, with *separate sections for different industries*, is always ready to assist you in the development of a new or improved process . . . suggest better methods of using, storing and handling SOLVAY Caustic Potash.

Write today for test samples and free literature.

ALSO AVAILABLE IN LIQUID FORM:

49-50% in Tank Cars

45% in Liquid Drums



Soda Ash • Snowflake® Crystals • Potassium Carbonate
Calcium Chloride • Sodium Bicarbonate • Ammonium
Bicarbonate • Cleaning Compounds • Caustic Potash
Sodium Nitrite • Ammonium Chloride • Chlorine
Monochlorobenzene • Para-dichlorobenzene
Ortho-dichlorobenzene • Caustic Soda

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SOLVAY PROCESS DIVISION

ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

Gentlemen: Please send me the following at NO COST OR OBLIGATION:

Samples: ☐ Solid ☐ Flake ☐ Small Flake ☐ Liquid

☐ Have your Technical Service contact me.

☐ FREE BOOK—"Caustic Potash and Potassium Carbonate."

Name

Company

Title

Address

City Zone State

DM-7

This successful sales formula gives your customers what they want in a wax!

**WEAR-
WELL
WAX**

Under Your Private Brand

12%

for all normal
traffic

16%

for Heavy-Duty
Severe
Traffic

12% & 16%

with LUDOX*
for extra Anti-Slip
Safety

You Can Ship and Store
in Any Weather

**WEAR-
WELL**

**SELLS
WELL**

*LUDOX is a
product and T. M. of
E. I. Du Pont De
Nemours & Co. (Inc.)

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To give your customers what they want in a self-polishing wax, we did what all good salesmen do. We conducted a survey of wax users. They were firm in their convictions. Keeping your selling problems in mind, we decided to "give 'em what they want." Our Laboratory came up with the answer: WEAR-WELL Self-Polishing Waxes. There are four types. Each gives your customers the five major things they want in a wax.

1. Light Color
2. High Gloss
3. Hardy Wear
4. U. L. Slip Resistance
5. Easy Application and Maintenance

Let's not take time talking about these waxes now. You'll want to see them. Test them. And take advantage of their down-to-earth price. Write for samples and detailed information about any or all of these customer satisfying waxes.

**WEAR-WELL WAXES are available from
our Los Angeles, California and Baltimore,
Maryland Plants.**

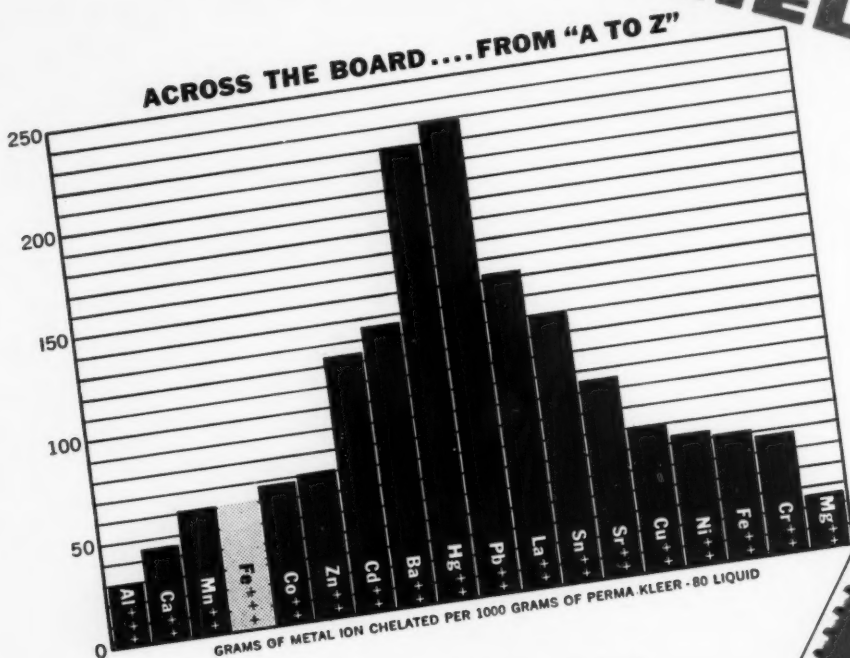


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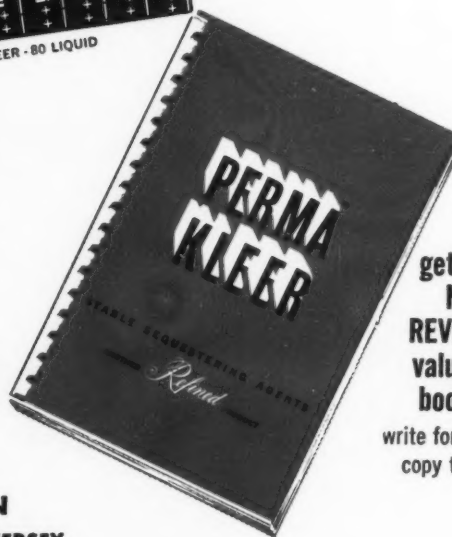
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get this
NEW,
REVISED
valuable
booklet
write for your
copy today!

SOAP

and Chemical Specialties

Formerly Soap and Sanitary Chemicals

Editor
FRANK J. REILLY

Associate Editor
CHARLOTTE HAAS

Business Manager
THOMAS MORGAN

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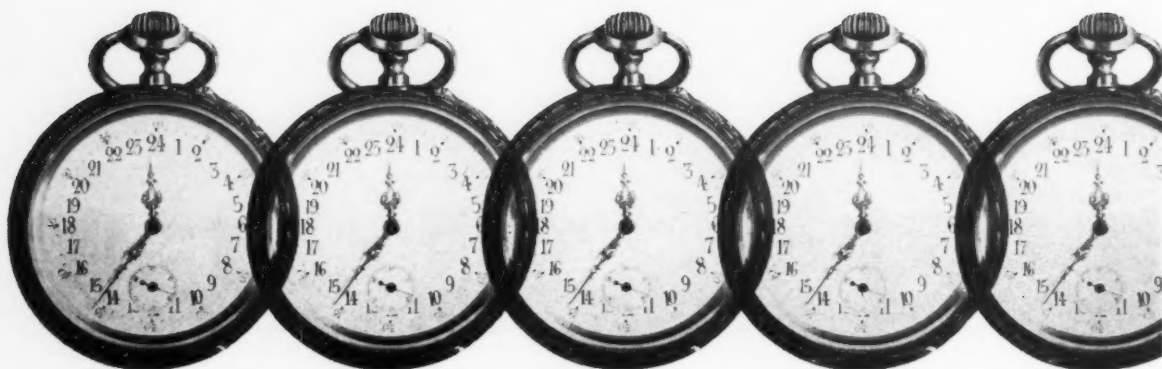
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Acids	Alums	Phosphates
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Basic Chemicals for American Industry



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ALLIED CHEMICAL & DYE CORPORATION

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New • Subtly Scented • Different
THESE ULTRA DE LUXE
**AIR CONDITIONING
BLOCS**
ARE BETTER 3 WAYS

1 Really Neutralize Odors!

Our Ultra De Luxe AIR CONDITIONING BLOCS and BLOCETTES, when exposed to the air, give off a delightfully scented vapor of which Chlorine is a hidden component. This vapor

is 5 times heavier than air. As it settles, it chemically neutralizes foul air and impure gases - then it rises again, releasing more subtle fragrance.

2 They Make Air PLEASANT!

People breathe fresh air in, then breathe carbon dioxide (CO₂) out. That's what makes air stale. Our De Luxe AIR CONDITIONING BLOCS and BLOCETTES,

through the vapors they release, tend to counteract stale odors - as well as perspiration and body odors - and thereby make the air FRESH, agreeably pleasant.

3 Save TIME - TROUBLE - EXPENSE

Our Ultra De Luxe Blocs LAST LONGER, need less frequent replacement, act MORE EFFECTIVELY throughout their longer life. Made of pure paradichlorobenzene and costly "perfume counter" scents, scientifically compounded to volatilize at the same rate as the para. (Powerful

hydraulic machines mold the ingredients, under enormous pressure, into super-hard Blocs that resist crumbling and premature evaporation.) Individually humid-wrapped airtight, BY MACHINE, in tough cellophane. Cannot deteriorate when properly stored. 25 standard fragrances.

WHERE USED . . .

Theaters, lavatories, toilets, smoking rooms, elevator shafts, school rooms, churches, taverns, safe deposit vaults, hospital rooms, waiting rooms, halls, chapels, resorts, hotel lobbies, clubs, locker rooms, closets and other places where undesirable odors arise or MOTH PROTECTION is desired.

INDIVIDUAL WALL CONTAINER - Handsome! Practical!

No more soiled, rusty, neglected metal containers! No more troublesome re-filling! No more expensive servicing! Just hang up our 24-Ounce Ultra De Luxe AIR CONDITIONING BLOC in its own good-looking, disposable wall container - easy as hanging up a calendar. Goes to work the instant you remove cellophane. Attractively printed cardboard container has louvred vents, in each side. These may all be opened at once, for maximum effectiveness - or opened two or three at a time, on each side, to suit your needs. Size 1¹³/₁₆" x 2¹/₄" x 7³/₁₆". Six Blocs to a set, 6 sets to a carton. Separate 24 oz.

Blocs, for use in standard containers, also available. Same size as above. Six to a set, 6 sets to a carton.



Just remove individual cellophane wrapper and drop in urinal. Destroys objectionable odors in and around urinal and all places where odors persist. Pleasantly perfumes the air. Depending on temperature and air currents in room, each Blocette lasts 2 to 4 weeks. Urine or water leave no effect on them. Can use in wall type container. 12 Blocettes, 2³/₁₆" round x 1¹/₁₆" - individually cellophane wrapped by machine - in telescope type tube. 12 tubes to carton. 25 standard fragrances. Blocs uncolored unless specified.



**Aire-Con
Bowl Deodorant
& Moth Killer**

Hang on wall - without removing from container - to kill moths and odors! Remove from container and hang by wire holder over bowl rim to deodorize!



**DESTROYS ROOM ODORS
HANG ON ANY WALL!**

**DEODORANT BLOC
HEADQUARTERS**

Hysan PRODUCTS CO.

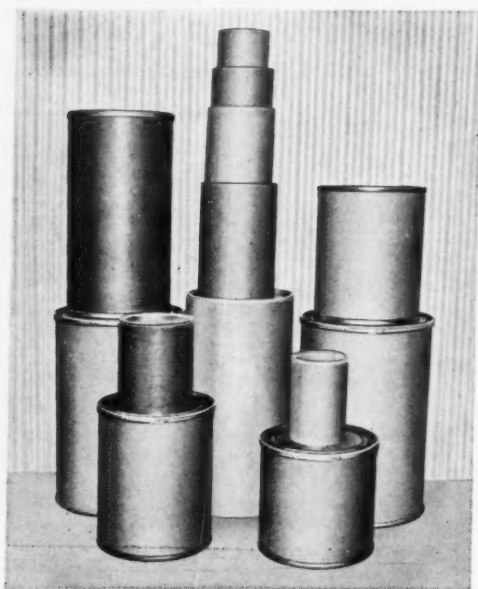
936 West 38th Place • Chicago, Illinois



NOW ! BOTH FIBRE *FROM ONE SOURCE*

RHEEM Announces a Complete Line of Fibre Drums to Provide an All-Inclusive Shipping Container Service

To supplement its line of steel shipping and custom equipment containers, Rheem has added a complete line of Fibre and Fibre-Metal drums. These strong, light weight, inexpensive drums come in four types and in a wide variety of sizes.



EVERY SIZE FOR EVERY NEED

Choose the size that best fits your needs. Fibre drums from 1 to 32-gallons in capacity; Fibre-Metal drums from 5 to 60-gallons. There is virtually a size for every possible requirement.

FOUR DIFFERENT TYPES

Choose the type that best fits your needs—All-Fibre drums, or Fibre-Metal drums with either slip or friction covers or with the new, easy to install and remove Rheem-Lox ring. Only Rheem offers all these types of low cost containers.

RHEEM FIBRE
All-fibre drum, light in weight, low in cost

RHEEM FIBRE METAL
... with easy to open slip cover

RHEEM FIBRE METAL
... with convenient friction cover

RHEEM FIBRE METAL
with new Rheem-Lox ring and steel bottom

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Now, More Than Ever Before, You Can Rely on



AND STEEL DRUMS - RHEEM

RHEEM STEEL
CONTAINERS ARE
MANUFACTURED
IN SEVEN
STRATEGICALLY
LOCATED PLANTS



30 gal. Rheem Fibre-Metal Drum 55 gal. Rheemcote Steel Drum

"FAMILY" IDENTIFICATION

Rheem can furnish on Fibre drums the same type of decorative service it provides users of Rheemcote lithographed steel drums. Any design or trade mark can be reproduced on an all-over label for Fibre drums in any number of colors to provide "family" identification for your products.

Rheem Fibre Drums are now being manufactured at four of these plants and additional production lines are scheduled for installation soon.

**MAIL COUPON IN NOW!
FOR COMPLETE INFORMATION**

RHEEM MANUFACTURING COMPANY
(Mail to Nearest Sales Office, Listed at Left)

- ☐ We would like to have your packaging engineers come to our plant and study our shipping container problems.
- ☐ Please send additional information.

NAME OF COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

BY _____

for All Your Shipping Container Requirements . . .

MORE PROFITS for those who want to

- sell the finest product money can buy for wax removal and surface cleaning
- save money on freight costs
- compound their own wax removers and surface cleaners

CANDY'S BRIGHT BEAUTY WAX REMOVER SURFACE CLEANER WATER EMULSION ALL PURPOSE

Properly used, BRIGHT BEAUTY cleaner will remove water emulsion wax from any floor without harmful effects to floor or floor coloring. It is the perfect all purpose surface cleaner and waxed floor maintenance wax remover. Pleasant odors (lemon or sassafras) crystal clear colors (natural yellow, red or green) and thorough cleaning action produce satisfied customers everywhere. For use on all floors with all types of equipment. The properties and appearance of BRIGHT BEAUTY cleaner are not affected by having been hard frozen then thawed and agitated. Before making any decisions regarding packaging your own cleaner, fully investigate BRIGHT BEAUTY . . . we are sure you will bear out our conclusions after all tests and trials.

THE COMPLETE CLEANER—READY TO USE FOR

	WAX REMOVAL		SURFACE CLEANING	
	RATIO OF WATER TO CLEANER	OZS. CLEANER PER GAL. WATER	RATIO OF WATER TO CLEANER	OZS. CLEANER PER GAL. WATER
15/16% CONCENTRATE	10-1	13 oz.	50-1 to 30-1	2½ oz. to 4 oz.
11/12% CONCENTRATE	7-1	18 oz.	40-1 to 25-1	3 to 5 oz.

SPECIFICATIONS:

15/16% Concentrate is available in 55, 30 and 15 gal. drums, 5 gal. pails, and cartons of 4 one-gallon glass jugs. (Net weight 8.72 lbs. per gal.)

11/12% Concentrate is available in 55, 30 and 15 gal. drums, 5 gal. pails, and cartons of 4 one-gallon glass jugs. (Net weight 8.64 lbs. per gal.)

30/32% Concentrated Concentrate is available in part full packages for dilution to 11/12% and 15/16% concentrates. (Net weight, 9.12 lbs. per gal.)

46/48% Concentrated Concentrate is available only in full 55 gal. drums, (net weight 520 lbs., 9.4 lbs. per gal.).

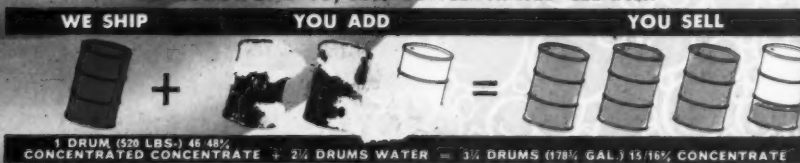
CANDY'S DISTRIBUTION AND SALES POLICY

Our products are available for private brand resale and are sold only through Distributors except for experimental accounts in Chicago essential to research.

FOR THOSE WHO WANT TO COMPOUND THEIR OWN CLEANER

Two methods are available—(1) By purchasing 30/32% solid content concentrated concentrate in part full containers, you need add only water and agitate containers by rolling and stirring contents. (2) By purchasing 46/48% solid content concentrated concentrate, you add water only in suitable mixing equipment to produce the retail package of the solid content percentage you desire. The charts below show compounding results for our recommended retail solid content percentages. Remember, you pay freight only on the 520 lbs. (net weight) of 46/48% cleaner and save the cost of shipping the water you add when you do your own compounding.

TO COMPOUND 15/16% CONCENTRATED CLEANER



TO COMPOUND 11/12% CONCENTRATED CLEANER



WAX SPECIALISTS FOR OVER 60 YEARS

Candy & Company, Inc.

2515 WEST 35TH STREET, CHICAGO 32, ILLINOIS

DE-FLY-ER

IS STILL KNOCKING 'EM DEAD!

Over 300 dealers have
been selling DE-FLY-ER
for OVER FOUR YEARS!

- ★ They're STILL selling them
- ★ They're STILL making money

After 4 years, we're still providing dealers with a machine that kills flies and other annoying insects. A machine that's free of mechanical difficulties, affords dealers an excellent profit margin, and is guaranteed for efficiency as well as fine mechanical operation.



1954 Promotional
Campaign includes advertising
help, sales bonuses, trade-in
allowances on old vaporizers and
free chemical refill offer

This new method positively controls flies, mosquitoes, moths, gnats, and other flying and crawling insects . . . and all without the bother and expense of sprays, odors, or stains. Progressive and profit-wise management is attacking the pests that steal their profits, by this better, proven method.

DE-FLY-ER
AUTOMATIC
INSECTICIDE VAPORIZER

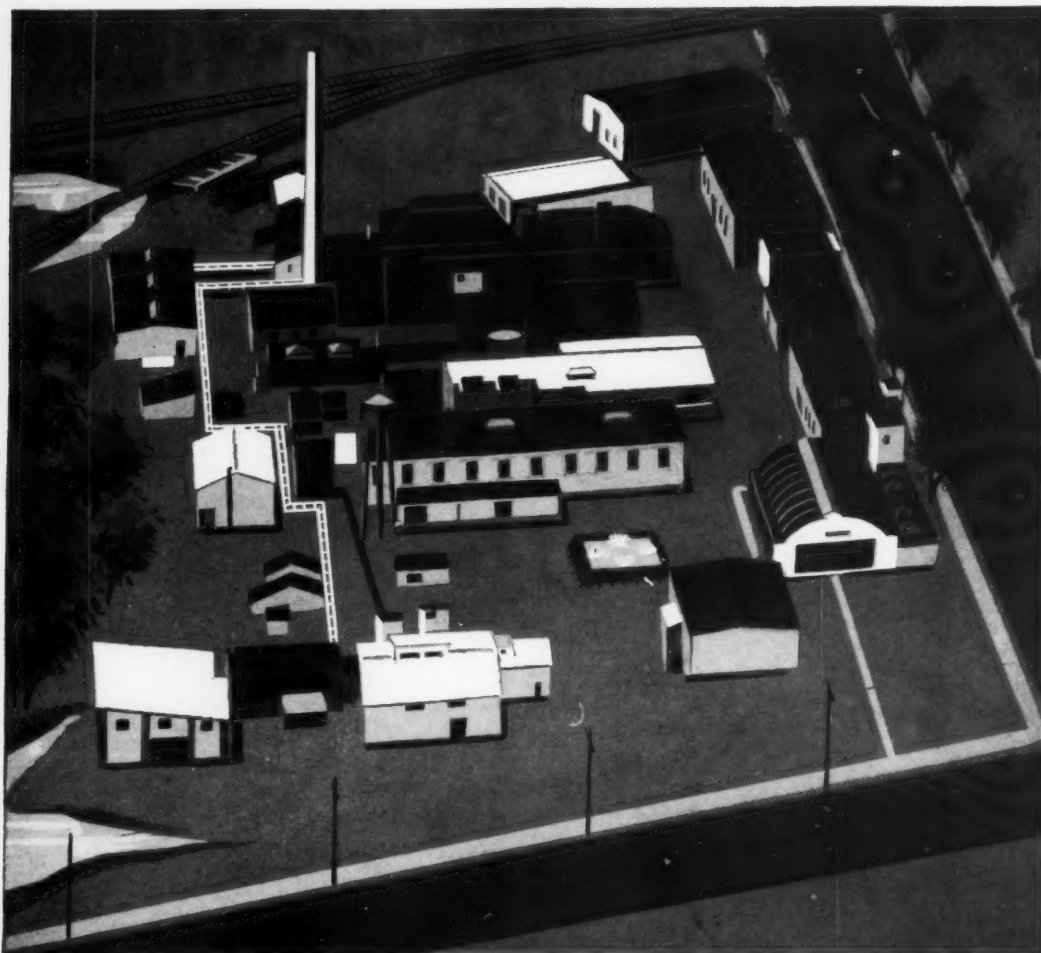
OVER 350,000
UNITS IN OPERATION IN
THE U. S., CANADA AND MEXICO

WRITE TODAY FOR INFORMATION!

"As long as there are flies, there will be DE-FLY-ER!"

DE-BUG-ER, INC. 205 NORTH BASSETT ST., MADISON 3, WIS.

Dedicated to Finer Fragrances!



This 10-acre plant of Verona Chemical Company is dedicated to the development and production of ever better organic chemicals for the perfume, toiletries, cosmetic, and soap industries.

Here the most modern production methods and the finest equipment are linked together with alert and experienced research and development laboratories . . . to give your products more alluring, more lasting fragrances.

Listed here are a few of the many outstanding Verona fragrances. Try them in your present oils and note the marked improvement.

ALDINE VERONA . . . With only $\frac{1}{2}$ to $\frac{3}{4}$ % you'll hit an exciting new aldehydic topnote.

RESEDALIA To make your Lily and Lilac scents come thrillingly alive—add $\frac{1}{2}$ to $\frac{3}{4}$ %.

CYCLAMAL Add up to 5%—for a cleaner, crisper impact.

CUMIN KETONE See how only $\frac{1}{4}$ to $\frac{1}{2}$ % added to your present floral fragrance heightens and freshens the effect.

Sole Representatives in the United States

for J. and E. Sozio, Grasse, France

Natural Absolutes • Resinoides • Essential Oils

Write for a complete list of Verona aromatic chemicals and specialties.

USE **VERONA**

PRODUCTS TO BUILD SALES FOR *Your* **PRODUCTS**

AROMATICS DIVISION

26 Verona Avenue, Newark, N. J.

VERONA CHEMICAL COMPANY

1210 Rosedale Avenue, Chicago, Ill.

HOW TO MAKE LIQUID CLEANERS

for
**FLOOR CLEANERS
WALL CLEANERS
WAX STRIPPERS**

use
NINOL 1281

The ideal synthetic detergent for formulating liquid cleaners with high viscosity and non-rusting features.

for
**DISHWASHING
CAR WASHING
SHAMPOOS**

use
NINEX 21

A foam-stabilized liquid synthetic for use wherever cleaners with copious suds and good viscosity are desired.

LOW COST and EASE OF FORMULATION make these two fine products of Ninol Laboratories especially well worth your trial. Between them, NINOL 1281 and NINEX 21 make it possible to formulate a wide variety of liquid cleaners for sanitary, industrial and cosmetic use, with many outstandingly salable characteristics.

★ WRITE TODAY FOR
BULLETINS, SAMPLES



Detergents—
—Emulsifiers

NINOL LABORATORIES, INC.

719 S. CLINTON • CHICAGO 16 • PHONE CHESAPEAKE 3-9625

Canada: Chemical Developments of Canada Ltd., 420 LaGauchetiere Street W., Montreal 1, Quebec

ALSO

**NINOL
AA62** Widely used lauric diethanolamide foam stabilizer for alkyl aryl sulfonates.

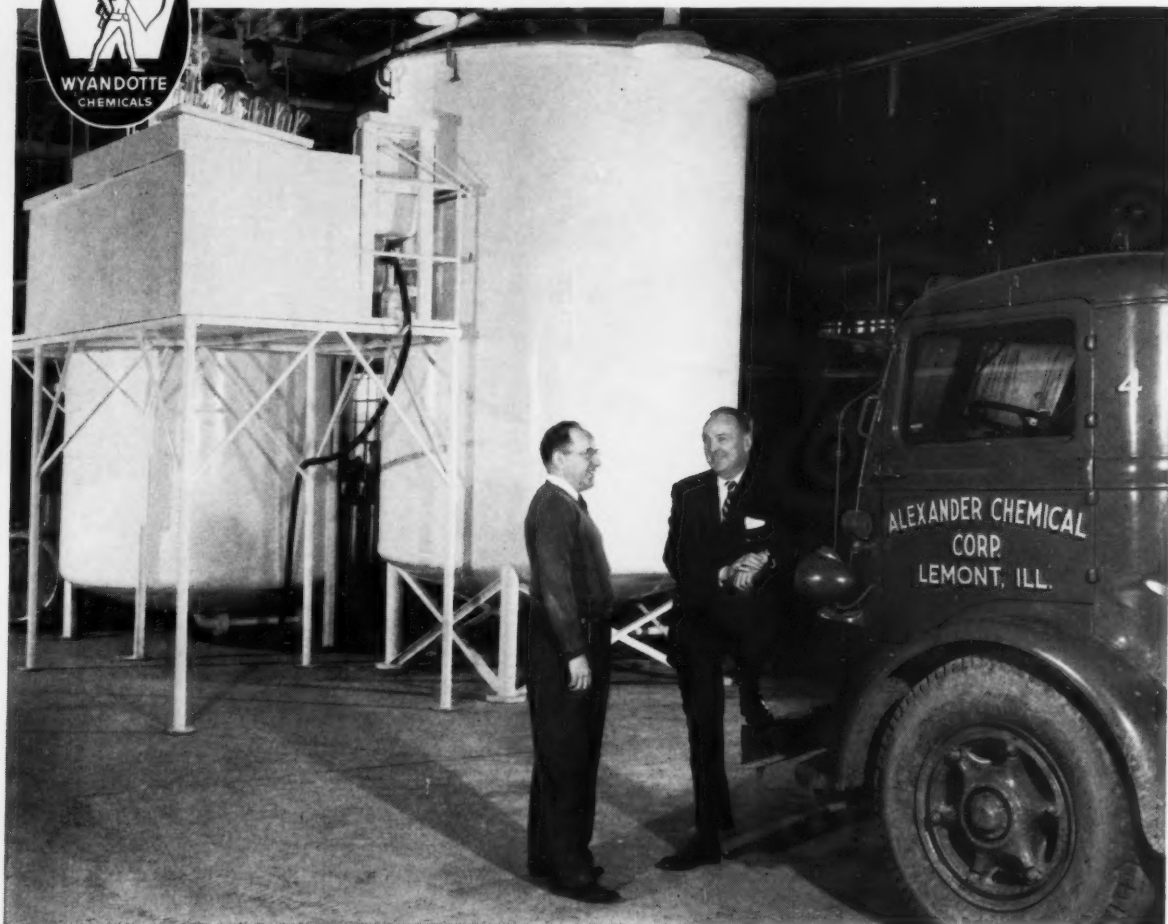
**NINOL
HA10** Oil soluble nonionic emulsifier for making water-in-oil emulsions for dry cleaning, etc.

**NINEX
300** Triethenolamine dodecylbenzene sulfonate in form of 60% salt free liquid, for industrial cleaning.

**NINEX
303** Sodium xylene sulfonate coupling agent to help dissolve detergents in alkali solutions.



Dependable Source for Chemical Raw Materials



A. B. Maley (right), president, Alexander Chemical Corp., inspects new Lemont, Ill. plant with Manager Paul Robinson. Top left: George E. Ulrich, foreman.

"Wyandotte helps us make better bleaches"

— A. B. Maley, president, Alexander Chemical Corp.

"We specialize in bleaches for industry, particularly for textiles and chlorinated starches," says President A. B. Maley, Alexander Chemical Corp., Lemont, Ill. "We also bottle chlorine and distribute it to many types of customers.

"A business like ours depends on ingredients of uniform high quality, modern handling facilities, and a convenient location. In the 25 years we have been doing business with Wyandotte, we have always found both their service and quality to be of the highest order. Wyandotte not only supplies us with caustic and chlorine — they also advise us on the best methods to transport,

handle, process and store them.

"Our new plant at Lemont, Ill. was designed with future needs in mind. It is located on the Chicago Ship Canal — which permits water shipments from the Gulf Coast and Great Lakes — and has excellent rail and highway connections. We're working for the future at Alexander Chemical, and Wyandotte is definitely included in our long-range plans."

How about *your* present and future plans? Wyandotte's wide range of organic and inorganic chemicals, our helpful technical assistance in the field, and our extensive facilities for cooperative

research are readily available. Write us, detailing your process or chemical problem. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*



HEADQUARTERS FOR ALKALIES

Soda Ash • Caustic Soda • Bicarbonate of Soda • Chlorine
Calcium Carbonate • Calcium Chloride • Glycols • Synthetic
Detergents • Agricultural Insecticides • Soil Conditioners
Other Organic and Inorganic Chemicals

Feature PURO DEODORANTS

for Quality that
Builds Customer
Satisfaction and
Repeat Profits

★
**More Economical . . .
Longer Lasting**

★
**100% Pure
Paradichlorobenzene
Fused with Fine
Perfume Oils**

★
Attractively Packaged

★
**Pleasing Scents
Assure Repeat Sales**

★
**A Complete Line
for Every Purpose**

PURO 4 OZ. DEODORANT BLOCKS

*Outstanding Seller For
Every Public Use*

Most popular size and shape, for urinals and general use. Made to U. S. Navy specification MIL-D-2178. Attractive cellophane wrap and special tube containers protect from evaporation. Available in pleasant Surf, Lilac and Rose colors. Economical—long lasting.

PURO SANA-BOLE DEODORANT

*Extra Profits From
This Exclusive Specialty*

Banishes odors at their source. Patented "Snap-on" wire hanger holds cake securely in bowl and practically out of sight. Delicate flower-like fragrance. Ideal for home, hotel, and public toilets—a much larger market than urinal blocks. A sensational repeater, 4 oz. cake.

PURO JUMBO DEODORANT BLOCKS

Heavy Duty Hanger Blocks

By popular demand, now available in 8, 12, 16 and 24 oz. cakes which are effective longer over a larger area. The three larger blocks come in convenient hanger containers. Cellophane wrap prevents evaporation before use. In clean-smelling Surf, Lilac and Rose.



*Write for Samples
And Jobber Prices*

THE *Puro* COMPANY, Inc.
(Established 1929)

3801 LOCUST STREET

ST. LOUIS 3, MISSOURI

for soaps and soap building



for soapless detergents



in cleaning compounds



in dishwashing compounds



for water softening



BLOCKSON Sodium Phosphates

Blockson is the major Sodium Phosphate producer that retains intimate small company flexibility by providing large and small customers alike with the phosphates they want when they want them...with a time-saving absence of red tape.

BLOCKSON CHEMICAL COMPANY
JOLIET, ILLINOIS



Blockson Plant . . . Joliet, Ill.

- Sodium Tripolyphosphate
- Tetrasodium Pyrophosphate, Anhydrous
- Sodium Polyphos (Sodium Hexametaphosphate) (Sodium Tetraphosphate)
- Trisodium Phosphate, Crystalline

- Chlorinated Trisodium Phosphate
- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous

- Monosodium Phosphate, Monohydrate
- Sodium Acid Pyrophosphate
- Sodium Silicofluoride
- Sodium Fluoride
- Hygrade Fertilizer





WHEN IT
Smells better
...IT
Sells better!



Simple statement of fact . . . yet of profound importance to the success of so many products. Pleasant fragrance adds a third dimension in product appeal and so often is the necessary ingredient for its success. Unfortunately, too many ill-advised perfumes are used for this purpose — perfumes that are inadequate for the job intended.

FELTON has specialized over the years in effective perfumes for all types of consumer and industrial products.

That's why you'll always find us a reliable source of supply.

**CORRECT
PERFUMES
FOR**

- PAINTS
- DISINFECTANTS
- CLEANING FLUIDS
- SOLVENTS
- INSECTICIDES
- LATEX
- TEXTILES
- DETERGENTS
- SOAPS
- and many other
INDUSTRIAL
PRODUCTS

WRITE US

ABOUT YOUR PERFUMING OR
NEUTRALIZING PROBLEMS.
WE'LL GIVE YOU THE RIGHT
ANSWER, without obligation.



AROMATICS • ESSENTIAL OILS • PERFUME BASES

FELTON CHEMICAL COMPANY, INC.
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SALES OFFICES: Atlanta • Boston • Chicago • Cleveland • Philadelphia • St. Louis • Toronto
Stocks Carried in Principal Cities



Volume buyers of SURFACE ACTIVE AGENTS!

it will pay you to investigate

ORONITE ALKANE

the basic raw material used
in making a variety of
detergents and wetting agents

If you are a large user or seller of surface active materials, it will pay you to talk over sulfonation with us. It could be more profitable for you to start with the base raw material, Oronite Alkane, and produce your own surface active agents.

1. Oronite Alkane is the principal and basic material used in sulfonating a great variety of the highest quality synthetic detergents and wetting agents. Because Oronite is the world's largest producer of

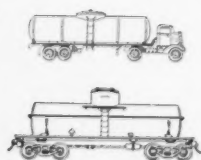
synthetic detergent raw materials, we can offer you assured supply on consistently high quality Alkane.

2. We have the experience, *plus* engineering and manufacturing specialists to accurately estimate your complete needs for sulfonation. Plant designs, equipment needs and prices, performance data, yields — everything you need to know. You may find the sulfonating process a lot less costly than you think. Why not talk it over? Write or phone the Oronite office nearest you and we will have a detergent engineer contact you.

OTHER ORONITE DETERGENT PRODUCTS

Detergent Slurry • Detergent D-40 • Detergent D-60
Dispersant NI-W • Dispersant NI-O • Wetting Agents

Oronite Alkane is available from three centrally located bulk storage terminals. Tank car or tank truck delivery.



ORONITE CHEMICAL COMPANY

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Mercantile Securities Building, Dallas 1, Texas



207A

After Closing...

Carman & Co. Liquidates

Stockholders of Carman & Co., New York laundry supply company, approved a directors' proposal to dissolve and liquidate the firm at a special meeting. A decline in the volume of commercial laundry business as well as increased competition from detergents were listed as factors in the company's decision to liquidate. Earlier E. S. Moore, president, had written to the stockholders that earnings in recent years had steadily decreased and there was little hope for satisfactory improvement.

Carman's sales in 1953 were put at \$15.6 million and the company earned 35 cents a share. A year later sales were down to \$14 million, with earnings of 55 cents a share.

Dingfelder Abroad

Adolph Dingfelder of Felton Chemical Co., Brooklyn, recently left for a six months trip to Europe and the Near East. The purpose of the trip is to survey business conditions and check on the Felton operation throughout the world. Mr. Dingfelder is to make his headquarters at the office and plant of Felton in Versailles, France. M. Leon Gefen, director of Felton French operations, who recently visited Felton's home office in Brooklyn has returned to his post in Versailles to work with Mr. Dingfelder.

G-R-P Executive Changes

John T. Gillespie, president of Gillespie-Rogers-Pyatt Co., New York, since 1929 and climaxing a business career of 60 years, was recently named chairman of the board. He is continuing his activity in the affairs of the company.

Louis Gillespie, representing the fourth generation of the family engaged in the business, has been

elected president of Gillespie-Rogers-Pyatt Co. The new head of the firm, which was originally established in 1824, is a past president of the New York Paint, Varnish and Lacquer Association.

Vote Olin Mathieson Merger

Stockholders of Olin Industries, Inc., East Alton, Ill. and Mathieson Chemical Corp., Baltimore, voted June 29 to approve the merger of the two companies to form a new corporation, Olin Mathieson Chemical Corp.

Both meetings also passed a restricted stock option plan for executives of the new corporation, to be substituted for similar plans previously in effect in the two companies.

The exact date upon which the merger will become effective will be announced shortly according to John M. Olin, president of Olin Industries and Thomas S. Nichols, president and chairman of Mathieson. John W. Hanes, financial vice-president of Olin, will become chairman of the finance committee of the new corporation.

Glycerine Awards Open

Entries for the 1954 glycerine research award are being sought by the Glycerine Producers' Association, it was announced recently. The work may concern itself with the chemical, physical, or physiological properties of glycerine or glycerine derivatives. It may deal with application of current or potential value to industry or the general public or with scientific principles or procedures likely to stimulate future applications. Originality in extending the application of glycerine into new fields of usefulness will receive special consideration for awards.

Entry blanks may be obtained from the Awards Committee,

Glycerine Producers' Association 295 Madison Avenue, New York 17, and all nominations must be sent in before November 1, 1954.

First award is an honor plaque and \$1,000, second award an honor certificate and \$300; and third award an honor certificate and \$200.

Boost Caustic Soda Price

The price of caustic soda was increased last month by three major producers 15 cents per cwt, or three dollars a ton. This is an increase of about 3½ to four percent.

The increase has been announced by Dow Chemical Co., Midland, Mich.; Diamond Alkali Co., Cleveland, and Solvay Process Division of Allied Chemical & Dye Corp., New York.

The price changes establish new carlot prices for solid and flake forms of caustic soda at \$3.85 and \$4.24 per cwt, respectively. The new price for 50 percent liquid rayon grade in tank cars is \$2.80.

Lever Gold Weight Contest

A contest in which the winning housewife will receive the cash equivalent of her weight in gold was announced late last month by Lever Brothers Co., New York. The contest, which closes Aug. 7, is being used to promote the sale of "Rinso White" and "Rinso Blue." To enter the contest housewives have to submit two box tops from one or both of the new "Rinso" products with 25 words or less telling which they prefer. The winner's weight is multiplied by the value of gold, which is \$510.40 a pound, to determine her earnings.

Buy Warner-Hudnut Stock

The purchase of 558,411 shares of the common stock of Warner-Hudnut Inc., from the estate of Gustavus A. Pfeiffer, has been contracted for by American Drug Products, Inc., New York, it was announced recently by Elmer Bobst, chairman of the board of Warner-Hudnut. American Drug Products, organized by F.

Eberstadt & Co., and Lazard Freres & Co. and associates, New York, would thus control 44.5 percent of Warner-Hudnut's common stock. In addition to Ferdinand Eberstadt, who is a member of the board, three other representatives of the purchasers are to join the Warner-Hudnut board of directors.

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Buys Aerosol Snow Patents

Continental Filling Corp., Danville, Ill., recently announced the purchase of patent No. 2,659,704, entitled "Self Spraying Artificial Snow Composition" from Robert J. Kerr Chemicals Inc., Park Ridge Ill. The patent was issued to Robert J. Kerr in 1953. Assignment of a patent application of Dr. A. L. Bunting, Plasteel Corp., Inkster, Mich., to Continental Filling was announced at the same time. This application is entitled "Simulated Snow Coating."

The Kerr patent and the Bunting application cover the use of fatty acids, either alone or in combination with various resins and plastics, and protect the use of certain specific solvents and propelling media. Continental Filling Corp. announced it will license any manufacturer, merchandiser, or seller of this type of product for a nominal royalty fee.

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Names Raw Materials

The Chemical Division of Armour and Co., Chicago, recently appointed Raw Materials Co., Boston, as sales representative for its fatty acid derivatives in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

For the past four years, Raw Materials has been the sales agent for Armour's fatty acid line in the New England area and the fatty acid derivatives will be in addition to those already handled.

Plans call for establishing stocks of these high molecular weight aliphatic chemicals in Boston to assure prompt deliveries.

Housekeeping Guild Elects

The election of Abraham J. Levy, special deputy attorney general of the state of Pennsylvania as president of the Industrial Housekeeping Safety Guild, Inc., Philadelphia, was announced late last month by William Plowfield, executive vice-president.

Other officers elected include: vice-president in charge of merchandising, Jack D. Hirsch, president of Formula Floor Products, Inc., Newark, N. J.; vice-president of the manufacturers group, Frank Levin, president of Curley Co., Philadelphia; vice-president in charge of research, Harry Beloff, M.D., Philadelphia, assisted by Dr. Lewis Beloff; chairman of the finance committee, Joseph Silver, president of Diamond Chemical & Supply Co., Wilmington, Del.; director assigned to the merchandising committee, William F. Kane, vice-president of Dryer Corp. of America, Philadelphia.

The following have been appointed to serve on committees set up in connection with the Guild's first annual convention and trade show to be held at the Ambassador Hotel, Atlantic City, N. J., from Nov. 6-11: chairman of the convention committee, Edward Snyder, sales director of Sidco Paper Co., Philadelphia; convention committee, Richard Ojserkis, sales director of E. Ojserkis & Sons, Atlantic City, N. J.; chairman of the committee on sanitation and safety, E. Willard Merritt, sales manager of Walter F. Legge Co., New York.

— ★ —

NSSA Dallas Meeting

A regional meeting of the National Sanitary Supply Association will be held at the Adolphus Hotel, Dallas, Tex., Aug. 7, it was announced recently. The program committee consisting of Lacy E. Crain, Conco Chemical Co., Dallas, T. W. Smith, Austin Chemical Co., Austin, Tex., and Jack Henderson, Candy Co., Chicago, have announced details of the scheduled activities.

Talks to be presented in the morning include: "Activities of the

National Sanitary Supply Association" by Bernard Kelly; "Necessary Information on Applying Floor Seals and Finishes" by R. D. Rosier, T. F. Washburn Co., Chicago; "Floor Brushes—Their Place in the Janitor Supply Business, and How to Select and Sell Them" by Bob Wittrock, Bexar Chemical Co., San Antonio, Tex.; and "Discussion of Insecticides" by Marty Herz, Bell Chemical Co., Dallas.

The afternoon meeting will hear Henry Hunter, Henry Hunter Co., San Antonio, on "Selling Wax in Our Present Market" and Jack Henderson on "How to Apply Wax." A cocktail party and dinner-dance will conclude the event.

The following are members of the attendance committee: David Wink, Laitner Brush Co.; M. Schubinski, Davies-Young Soap Co.; and Malcolm Carroll Co., all of Dallas; Earl T. Asel, Golden Star Polish Manufacturing Co., Kansas City, Mo.; L. R. Dick Smith, Peck's Products Co.; Austin; W. A. Marquis, Jr., Marquis Supply Co., Lubbock, Tex.; Harry J. Kline, Magnolia Paper Co., Houston; G. R. Welch, Corpus Christi Janitor Supply Co., Corpus Christi, Tex.; Marshall Turner, Austin Chemical Co., Austin; W. T. Leachman, State Chemical Co., Amarillo, Tex.; C. L. Goltra, Oklahoma Janitor Supply Co., Tulsa; J. W. Tackett, Tackett-East Janitor & Chemical Co., Muskogee, Okla.; Darr B. Sims, Northwest Maintenance Co., Enid, Okla.; Ed Hale, Hale Sanitary Supply Co., Albuquerque, N. M.; Joseph Lassen, American Chemical Co., New Orleans; and E. W. Anderson, Louisiana Paper Co., Shreveport, La.

— ★ —

Hollingshead Advtg. Head

The appointment of Anthony C. Kupris as general advertising manager of R. M. Hollingshead Corp., Camden, N. J., was announced early this month. He succeeds R. E. Conley, who has resigned. Mr. Kupris is responsible for all advertising, as well as sales promotion and sales training programs for Hollingshead.

Before joining Hollingshead, Mr. Kupris was with Standard Oil Company of Indiana, Chicago, where he did sales promotion and advertising work. His most recent assignment was assistant to the advertising manager and sales manager of the company's Chicago division.

Freewax Modifies Claims

Freewax Corp., Tallahassee, Fla., has recently entered into an agreement with the Federal Trade Commission to modify its advertising claims for the insecticidal floor wax "Freewax." Under the agreement the firm will stop representing that the product banishes bugs, rids premises of bugs, or affords freedom from insects; that it is safe or harmless except when used as directed.

Michael Sveda Honored

Dr. Michael Sveda, assistant manager of industrial chemical sales of the Grasselli Chemical Department of E. I. du Pont de Nemours and Co., Wilmington, Del., was named as the outstanding University of Toledo alumnus for 1954 at the annual Alumni Association meeting held on the university campus June 19.

Dr. Sveda, a 1934 honor graduate of Toledo University, joined du Pont in 1939. He is noted for his discovery of "Sucaryl" sodium cyclohexyl sulfamate, which he synthesized while working for his doctorate.

Joining du Pont as a research chemist, Dr. Sveda became a research supervisor in 1945, and was group supervisor of silica products development in the Grasselli sales organization from 1948 to 1952. In these capacities he was associated with research on process development and new uses for "Ludox" colloidal silica which led to its use in floor waxes to make them slip resistant.

Maneb Now a Coined Name

The word "maneb" has been accepted as a coined name for the pure form of the fungicidal chemical manganese ethylenebisdithiocarbamate it was announced recently by the Interdepartmental Committee on Pest Control. A technical grade of the compound shall indicate the percentage of maneb present. A wettable powder formulation designated "Manzate" and containing 70 percent maneb is com-

mercially available. "Manzate" is a registered trademark of E. I. du Pont de Nemours & Co., Wilmington, Del.

Strauss Completes Trip

I. Y. Strauss, president of Dura Commodities Corp., New York recently returned from an extensive inspection trip of European wax producing centers. Mr. Strauss expressed the opinion that synthetic waxes, especially those produced in Germany by the modified Fischer Tropsch synthesis will gain considerably in importance over the next ten years. Mr. Strauss stated that the available facilities for Fischer Tropsch waxes are sufficiently large to cover world requirements of hard waxes adequately. Considerable progress has been made in the development of esterified and emulsifiable waxes by European chemists, Mr. Strauss said.

Dura Commodities is the sole representative in the United States, Canada, and Mexico of Krupp Kohlechemie G. M. B. H., one of the largest producers of Fischer-Tropsch waxes.

GDC Merges with GAF

Formal completion of the merger of General Dyestuff Corp. with General Aniline & Film Corp., both, New York, was approved by GAF directors at a meeting July 1, it was announced by Jack Frye president. The merger follows the purchase by General Aniline last November of all the stock of General Dyestuff.

Crittenton Curtis Vice-Pres.

The election of Charles N. Crittenton as vice-president and general sales manager of the toiletries division of Helene Curtis Industries, Inc., Chicago, succeeding L. A. Sauers, who resigned, was announced recently. Mr. Crittenton was director of sales for the shaving instrument division of Ever-sharp, Inc., and was formerly manager of the Pepsodent division of Lever Brothers Co., New York.

Coast Aerosol Can Plant

Continental Can Co., New York, announced recently it will produce a full line of 12-ounce non-food aerosol cans at its metal container plant in Stockton, Calif. The firm thus claims to be the first "on-the-spot" manufacturer of aerosol cans in the West. Two styles of 12-ounce aerosol containers are now being produced at Stockton, the dome top and the concave. In addition, Continental is also manufacturing its 12-ounce whipped cream dispensing container at the Stockton plant.

Click Chemical Expands

Click Chemical Corp., Mount Vernon, N. Y., recently announced the completion of new office and manufacturing facilities, which will double its plant capacity. Click Chemical Corp., located on Columbus Avenue in Mount Vernon is converting its former office space to warehousing and manufacturing facilities.

New Aldrin Booklet

"How to Kill Grasshoppers with Aldrin" is the title of a new eight page booklet announced recently by Shell Chemical Corp., Denver. When to apply aldrin, how to apply it, a summary of its successful use in other countries, dosage recommendations and its residual kill are covered in the booklet.

Lawson Issues Leaflet

F. H. Lawson Co., Cincinnati, published a leaflet describing and illustrating its "Torpedo" receptacle which now comes in three sizes. Consisting of a galvanized inner container and a bonderized shell, the receptacle features a self-closing push door of stainless steel, rubber door silencer, and is finished in white or olive green baked enamel.

Shown also in the leaflet is the firm's "Big Dome Top" self closing heavy flaring ash can. This refuse can is said to be vermin and rain proof.

Jones Joins Geigy

The appointment of Harold B. Jones as sales representative in the state of Mississippi was announced early this month by Geigy Agricultural Chemicals, division of Geigy Chemical Corp., New York. Mr. Jones is making his headquarters at Leland, where Geigy maintains a sales office and formulating plant. Previously he was an agricultural specialist with the University of Tennessee Extension Service from 1945 to 1951, after which he supervised the Office of Price Stabilization at Memphis from 1951 to 1952. Mr. Jones returned to the University of Tennessee for the following year and then supervised Blanco Gin Co. from July 1954 to May 1954.

Shellac Importers Golf

The United States Shellac Importers Association, New York, held its semi-annual Golf Outing at the Wheatley Hills Country Club, E. Williston, N. Y., June 22. Under cloudless skies over sixty members of the industry played golf and enjoyed the other facilities of the Club.

John Hall of Dings and Schuster, Inc., won the prize for low gross and Frank Watts came in with the low net score for the day and thus went home with the Berli-Jucker Cup. Reginald Sanger of the Cunard Line held the No. 1 spot in the kickers handicap.

Hercules Dept. Expands

Expansion of the activities and personnel of its synthetics department was announced late last month by Hercules Powder Co., Wilmington, Del.

John E. Biegner has been appointed district manager of the departments' New York area to succeed Paul Lefebvre, who is resigning from the company because of ill health. Mr. Lefebvre remains in the New York office as special representative until Aug. 31. Mr. Biegner has been with Hercules since 1941.

Clifton S. Skow has been ap-

pointed as a technical sales representative in the New York office of the synthetics department to succeed Mr. Biegner who has been in that office for the past three years. Earlier he had been a research chemist. Mr. Skow joined Hercules in 1950, immediately upon his graduation from Bucknell University, as a chemical engineer at the Experiment Station in Wilmington.

Joining the development group of the synthetics department are Edwin S. Moler, Jr., and Robert C. Bogott. Mr. Bogott has been on a military leave of absence. He is a Purdue graduate and joined Hercules in February, 1951 as a member of the applications research group at the Experiment Station. Mr. Moler joined Hercules in 1953 as a chemist at the station following service in the Army Air Force. He was graduated from Lehigh University.

New Crown Litho Plant

Ground was broken for a new \$4,500,000 lithography plant in North Philadelphia, it was announced last month by the Crown Can Division of Crown Cork & Seal Co., Baltimore. The new plant, to provide 204,000 square feet of floor space, is to be built of hollow tile masonry, glass wall and brick. Air conditioned and humidity controlled, the building will be two stories in front, where offices will be located, and one story in the rear manufacturing area, which will house some of the latest type litho presses and ovens and six coaters.

Eire Taxes Pesticides

Customs duties on disinfectants and insecticides, suspended since Oct. 4, 1942, have been restored by the Irish Government and the tariff nomenclature has been extended to include antiseptics and weedkillers. The new full rate of duty on these products of 50 percent ad valorem (formerly 33½ percent) applies to imports from all countries except the United Kingdom and Canada which enjoy the preferential rate of 33½ percent.

Dow Joins Bourjois

Henry O. Dow, formerly sales manager of Alfred D. McKelvy Co., New York, recently joined Bourjois, Inc., and Barabar Gould, Inc., both New York.

June D&O Price List

The issuance of its catalog and price list of essential oils and aromatic chemicals for June was announced late last month by Dodge & Olcott, Inc., New York. Thirty-six pages of product listings, descriptive information and latest prices of oils, aromatic chemicals and specialties, oleoresins and certified colors make up the new catalog, which again follows the recently established format of pocket size and quarterly publication.

Heads Diamond Advertising

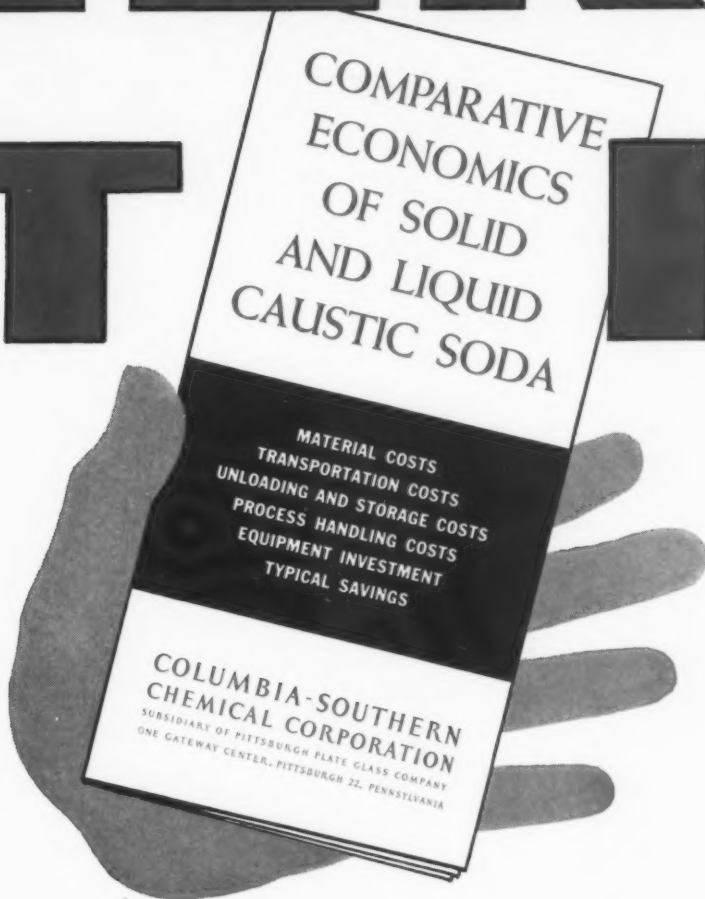
The appointment of Arthur O. Schulze as manager of public relations and advertising of Diamond Alkali Co., was announced July 1. Mr. Schulze previously for seven years had been with the publicity and publicity relations firm of Hill and Knowlton, Cleveland, where he did publicity and public relations for Diamond.

Oscar E. Kuhlman, who has been editing Diamond's Painesville plant employee publication for the past three years, has been advanced to assistant manager of public relations and advertising.

New Kinetics Section

Establishment of a market analysis section for the "Kinetic" Chemicals Division was announced recently by E. I. du Pont de Nemours & Co., Wilmington, Del. The new section is headed by Joseph C. Hoopes, who joined the firm in 1942 as laboratory technician at the Jackson Laboratory in Deepwater Point, N. J. After serving in the sales development section of the Organic Chemicals Department from 1946 to 1949 he joined the trade analysis division and was later associated with the sales division of the Textile Fibers Department.

HERE IT IS



YOUR PROFITABLE GUIDE AND IDEA BOOKLET ON CAUSTIC SODA

The first time ever published, this handy, easy-to-read reference booklet packs a lot of facts in a few orderly pages.

Answers the questions: "What form of Caustic Soda should I buy?" "How do I figure costs?" "How much will I save?" "What equipment will I need?" "What about transportation and unloading?"

GET YOUR FREE COPY NOW!

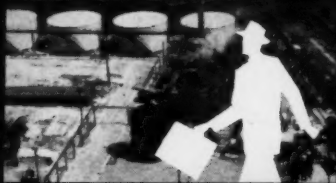
If your work involves the use of caustic soda, you will find this booklet very helpful. Write today on company stationery for Comparative Economics Booklet, Columbia-Southern Chemical Corporation, One Gateway Center, Pittsburgh 22, Pennsylvania.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION

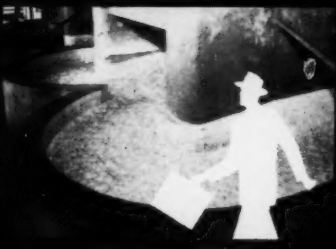
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WATER AND SEWAGE

Take a trip with a MATHIESON Technical Service Man

This man, typical of the Mathieson Technical Service Staff, is experienced on an industry-wide basis in the handling and use of industrial chemicals. Every day, as a trip with a Mathieson Technical Service Man would show, brings up new problems on which his broad experience is invaluable. For example:

A paper mill in New England is visited and advised on super-bleaching with chlorine dioxide. A soap manufacturer in the Middle West wishes to discuss the advantages of low-iron caustic. A chemical plant in the East is counseled on the storage and handling of sulphuric acid. Several Southern textile mills are visited in connection with the storage of soda ash. A gray-iron foundry in Ohio is advised on controlling sulphur with Purite. A glass plant in the Southeast wants information on soda ash and nitrate of soda. A petroleum refinery in the Southwest seeks assistance on the handling of caustic soda, and several water works are advised on taste and odor control with chlorine dioxide.

And so it goes. More and more, industry is looking to Mathieson Technical Service for practical assistance on the handling and use of basic chemical raw materials. A call to your Mathieson representative is all that's needed to avail yourself of this industry-wide experience.



MATHIESON CHEMICAL CORPORATION

Mathieson Industrial Chemicals Division
Baltimore 3, Maryland

2022

caustic soda • soda ash • chlorine • sulphur • bicarbonate of soda
dry ice and carbonic gas • ammonia • sodium nitrate • nitric acid
hydrazine products • sodium methylate • sodium chlorite • hypochlorite
products • sulphuric acid • ethylene glycols and oxide • methanol

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**Now—See for yourself
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new liquid *Nacconol SL*

can give your liquid detergents.

Test-sample will clearly show you all these
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**pleasant characteristic odor—very low haze-point
no precipitation at temperatures down to freezing
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excellent foaming—emulsifies grease and oil
compatible with anionic and non-ionic materials**
plus this big economy feature
needs no dissolving—cuts production cost

For a better liquid detergent always start with a
liquid base. If your line includes—or you
contemplate adding—a liquid detergent, phone,
write or use this handy coupon to get a liberal
sample of Nacconol SL. You'll be glad you did.



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Providence 3, R.I., 15 Westminster St.
Philadelphia 6, Pa., 200-204 S. Front St.
San Francisco 5, Cal., 517 Howard St.
Portland 9, Ore., 730 West Burnside St.
Chicago 54, Ill., The Merchandise Mart
Charlotte 1, N.C., 201-205 West First St.

CApitol 7-0490
DExter 1-3008
LOndond 3-6382
SHutter 1-7507
DEacon 1853
SHypprior 7-3387
CHarlotte 3-8221

Richmond 18, Va., 8 North Fifth St.
Columbus, Ga., Columbus Interstate Bldg.
Greensboro, N.C., Jefferson Standard Bldg.
Chattanooga 2, Tenn., James Building
Atlanta, Ga., 1216 Spring St., N. W.
New Orleans 12, La., Carondelet Building
Toronto 2, Canada, 137-143 Wellington St. W.

Richmond 2-1830
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Greensboro 2-2518
Chattanooga 8-6347
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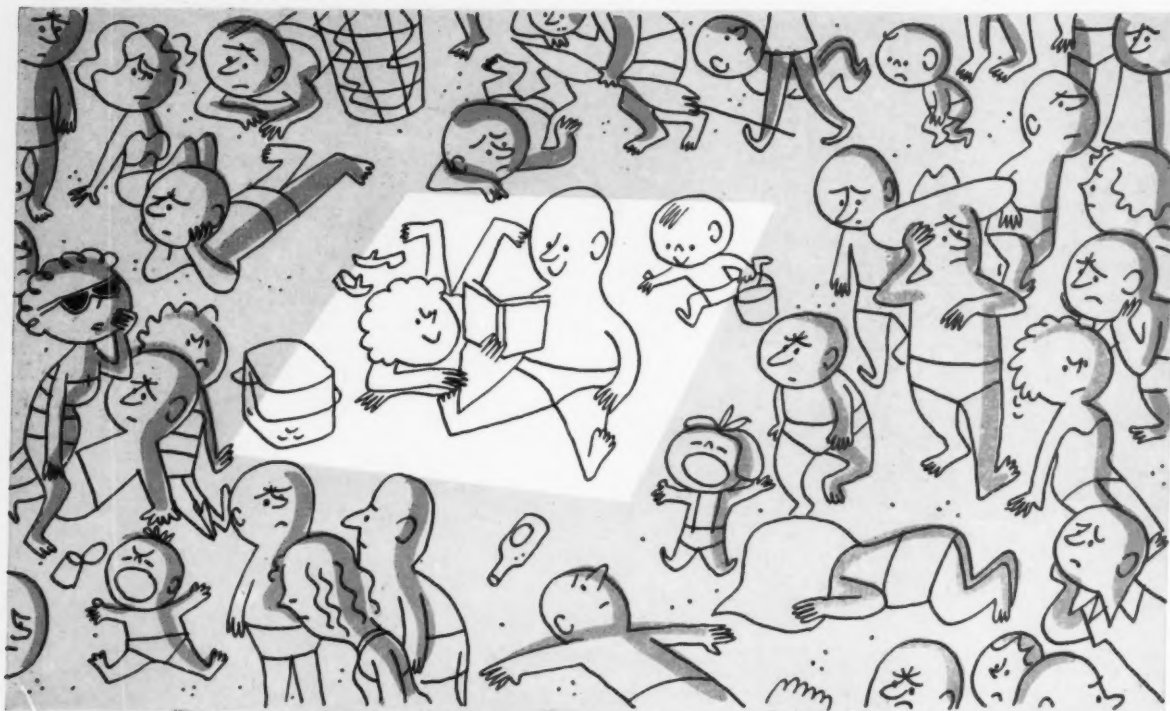
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Norda helps

Many of the most popular lotions, creams, colognes, and other such summer sun-fighters contain Norda ingredients. Norda fine perfume compounds have helped make them successful sellers.

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Good sales result from good scents. Norda has said so for years — Norda said so first, away back.

Use good scents for good sales, every season. Get your good scents from Norda. Send today for convincing samples.

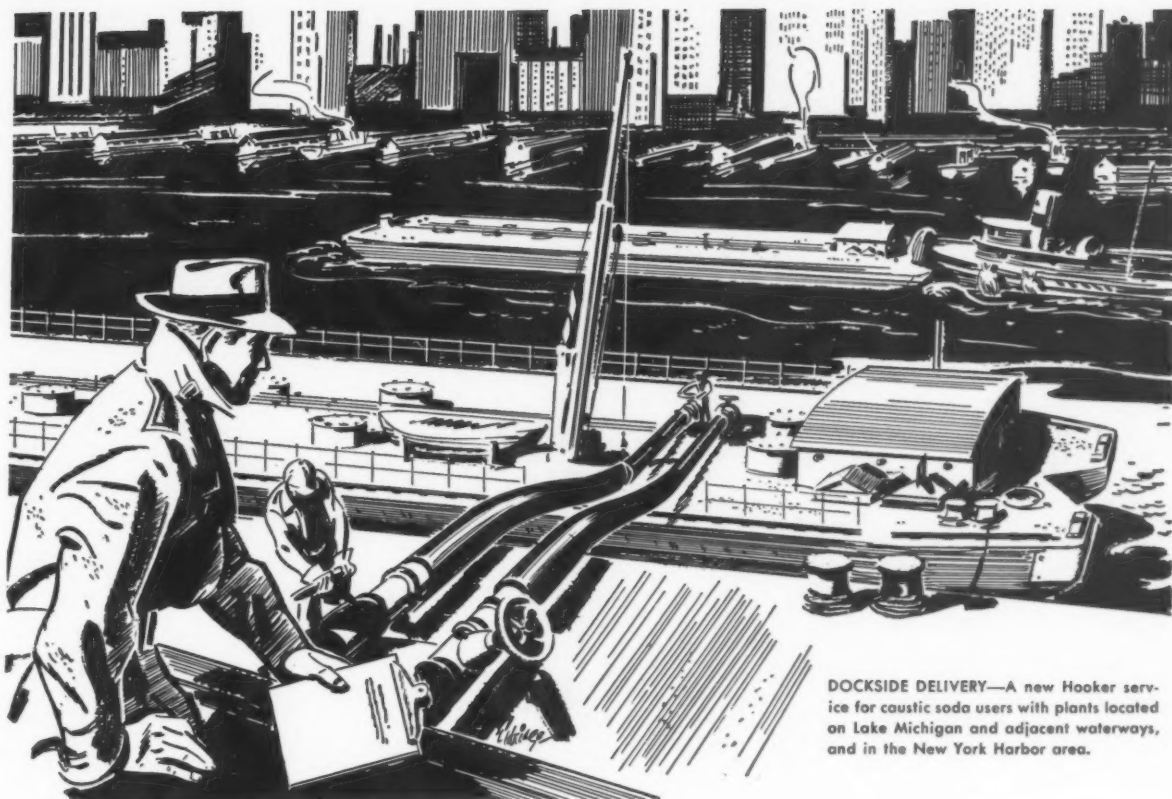
Norda ESSENTIAL OIL AND CHEMICAL COMPANY, INC.
601 West 26th Street, New York 1, N. Y.

*Always remember —
never forget*



Norda makes good scents

CHICAGO • LOS ANGELES • SAN FRANCISCO • DALLAS • MONTREAL • TORONTO • HAVANA • LONDON • PARIS • GRASSE



DOCKSIDE DELIVERY—A new Hooker service for caustic soda users with plants located on Lake Michigan and adjacent waterways, and in the New York Harbor area.

For safe, sure, consistent results . . .

STANDARDIZE on Hooker Caustic Soda

Why this is important to you:

With *uniform* caustic soda coming in, shipment after shipment, you can standardize your caustic handling and processing.

You need not adjust your process to meet variations in incoming caustic shipments. You can be sure each new shipment matches your current inventory.

You get this kind of uniformity with Hooker Caustic Soda. Every step in the manufacture—from salt brine to tank car—is controlled at Hooker, by Hooker. More than 20 separate inspections and analyses safeguard the uniformity of the Hooker Caustic you buy.

This is one reason why leaders

in 30 industries specify *Hooker* Caustic—and why many have specified it for nearly 50 years.

Hooker uniformity can pay off for you, too—in lower operating costs and smoother, better processing. Try it and see. A letter or phone call to the nearest Hooker office will bring you product data and contract information.

Buy the UNIFORMITY Hooker Caustic Soda gives you

Forms: Liquid 50% and 73% • Flake • Solid • Special fine flakes

Containers: Tank cars • Tank wagons • Barges • Drums

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From the Salt of the Earth

HOOKER ELECTROCHEMICAL COMPANY

HOOKER ELECTROCHEMICAL COMPANY

Buffalo Ave. & Union St., Niagara Falls, N. Y.

Please send ☐ data sheets on Hooker Caustic Soda; ☐ Bulletin 100 describing Hooker products and services.

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Company.....

Address.....

City.....Zone.....State.....

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when it's

the economical detergent silicate

Sixty pounds of DRYMET—*anhydrous* sodium metasilicate—will do the same amount of work as one hundred pounds of pentahydrate sodium metasilicate! You get approximately two thirds more chemical value in DRYMET, yet the price is less than one fourth higher at the producing factory!

DRYMET contains no water of crystallization. DRYMET is more economical to use on the basis of Na_2O (alkalinity) and SiO_2 (silicate) than *any other* type of anhydrous or hydrated detergent silicate.



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HEAVY CHEMICAL DEPARTMENT

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1. Floor Cleaners
2. Laundry Products
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*Reg. U. S. Pat. Off.

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SOAP and CHEMICAL SPECIALTIES

Cellulose Gum (CMC)



A WATER-SOLUBLE FILM-FORMER WITH AN AMAZING RANGE OF VERSATILITY

Water solutions of cellulose gum (purified Hercules® CMC) can be evaporated to form clear, tough, flexible films.

Many industries, including textile, ceramic and paper, are already using cellulose gum in widely diversified applications based on its excellent film-forming properties.

Hercules cellulose gum has exceptionally high purity (99.5%+); is compatible with a

wide variety of gums, plasticizers, and resins; is insoluble in organic solvents; and is uniformly high in quality from lot to lot. Write for testing samples, indicating proposed uses so that we may determine the proper types.

Cellulose Products Department
HERCULES POWDER COMPANY
INCORPORATED
961 Market Street, Wilmington 99, Delaware



CM54-G



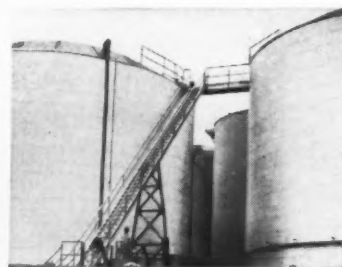
S. S. Marine Dow-Chem on first arrival at expansive Bayonne Terminal.

New Dow Ship and New Dow Terminals speed volume delivery of 73% caustic soda to users

The Dow Chemical Company now has extensive new caustic soda solution distribution facilities in operation. The *S. S. Marine Dow-Chem*, first tanker ever designed and built exclusively for the sea transportation of liquid chemicals, currently delivers 73% caustic soda in volume quantity to two new Atlantic seaboard bulk terminals, located at North Charleston, S. C. and Bayonne, N. J. Both this thoroughly modern 18,000-ton chemicals carrier and all terminal facilities for cargo unloading, storage and transshipment safeguard the uniform high purity of Dow's 73% caustic solution.

One hundred thousand pounds of commercially pure nickel were used in construction of the *Marine Dow-Chem's* caustic cargo tanks, pumpline and heating coils. Terminal storage tanks are fully nickel-clad, all loading and unloading pumps and lines are pure nickel. Nickel steam heaters keep 73% solution at the exact temperature desired.

This important distribution expansion means that Dow customers are assured even faster delivery—another good reason for placing that caustic order with Dow. THE DOW CHEMICAL COMPANY, Midland, Michigan.



New flagship of extensive Dow waterways fleet begins maiden voyage from Freeport
... new nickel-lined tanks at Bayonne protect 73% caustic purity during storage.

you can depend on DOW CHEMICALS



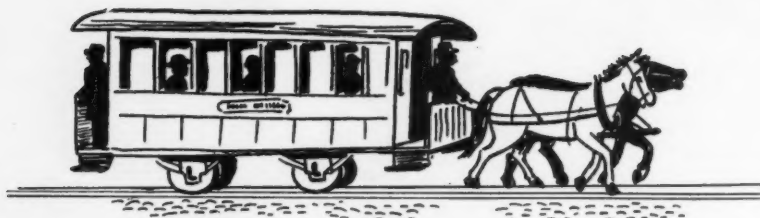


*The scent of soap
can be an impelling spur to sales*

Tell your story well through the selection of the proper perfume. For suggestions and recommendations, ask the advice of the van Ameringen-Haebler soap perfumers who are unmatched in skill and experience in this field of scent.

VAN AMERINGEN-HAEBLER, INC. 521 WEST 57th STREET, NEW YORK 19, N. Y.

JULY, 1954



Since the Days of the "Horse Car..."

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FROM THIS LIST**

VEGETABLE OILS

Babassu	Olive
Castor	Palm
Cocanut	Peanut
Corn	Sesame
Cottonseed	Soybean

ANIMAL FATS

Sperm Oil	Grease
Oleo Stearine	Tallow
Lard Oil	Lanolin
Neatsfoot Oil	

FATTY ACIDS

Red Oil	Tan Oil	Tallow
	Stearic Acid	
	Hydrogenated Fatty Acid	
	Cottonseed and Soybean	
	Fatty Acids	

ALKALIES

Caustic Soda, Solid, Liquid, and Flake; Soda Ash, Light and Dense
Carbonate of Potash, calcined and hydrated
Calcium Chloride
Tri Sodium Phosphate
Tetra Pyro Phosphate
Quadrafos Granular and Beads—a stable polyphosphate for water conditioning and mild but effective detergency.

**Soapers have depended on WH&C
...for Raw Materials of Quality**

SINCE 1838, we've been supplying the nation's "soapers" with basic raw materials.

SILICATE OF SODA—Liquid powdered and solid.

METSO* 200—(Sodium Orthosilicate)

METSO* ANHYDROUS—(Anhydrous Sodium Metasilicate)

METASILICATE—"Metso"* Granular.

METSO* DETERGENTS—55, 66, 99.

MAYPONS—Unique surface active agents; prolific foam; high detergency and emulsifying powers; suitable for cosmetic and industrial use.

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*Reg. U. S. Pat. Off., Phila. Quartz Co.

Let us mix your dry private formulas

Established 1838

Welch, Holme & Clark Co., Inc.

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Warehouses in New York and Newark, N. J.

**A QUALITY CHOICE OF THE WORLD'S
LEADING SYNTHETIC DETERGENT PROCESSORS!**

NEOLENE 400

INTERMEDIATE FOR SYNTHETIC DETERGENTS

From its introduction, Neolene 400 has been recognized for quality as a raw material for synthetic detergents and other surface-active agents of the alkyl aryl sulfonate type. Today Neolene 400 exhibits exceptional quality when used in the newest method of sulfonation — utilizing liquid SO_3 .

Neolene 400 is one of the many petrochemical products produced by Continental Oil Company. For Neolene 400, for slurry, or for finished detergent products, look to Conoco Petrochemicals. *Samples and technical information, based on pilot plant or commercial production, furnished by request on your letterhead.*

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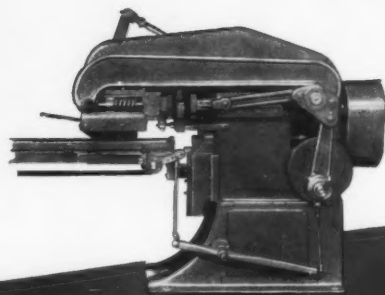


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JONES *Specialists*

... in Automatic Soap Presses

JONES PRESSES, with their exclusive, patented *toggle motion*, have become the standard throughout the world wherever high production, high quality, and perfection of finish are paramount considerations. Standard Jones Presses illustrated here meet all soap pressing requirements. A Jones Toggle Operated Soap Press will improve the appearance of your product, increase your production, reduce your costs. Write today for complete information.



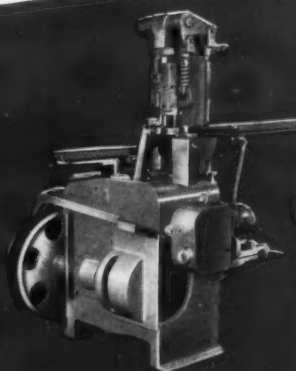
Type K Simplex Press

For toilet or laundry soap cakes of any shape (except highly convex cakes) with side band. Speeds of 120-140 cakes per minute.



Type K Duplex Press

Applications same as Type K Simplex. Presses two cakes simultaneously. Speeds up to 250 cakes per minute.



Type ET Press

For small toilet soap cakes with side band. Speeds up to 120 cakes per minute.



Type R

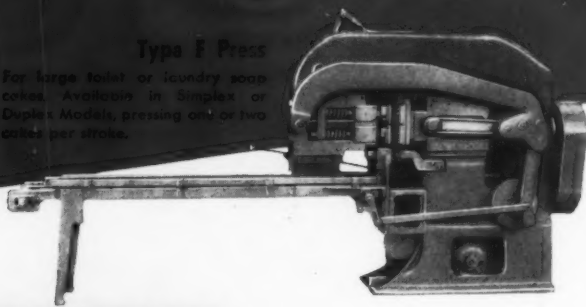
Pin Die Press

For toilet soap cakes of unusual shape, oval cakes, or cakes having highly convex faces, with or without side band. Speeds up to 100 cakes per minute.



Type F Press

For large toilet or laundry soap cakes. Available in Simplex or Duplex Models, pressing one or two cakes per stroke.



R. A. JONES & COMPANY, INC.

Cartoning Machines - Soap Presses

P. O. BOX 485

CINCINNATI, OHIO

... in brief

MOTH CONTROL Damage by clothes moths and carpet beetles has been estimated variously at a half-billion dollars per year and up depending on who does the estimating. But no matter what the figure, there is no doubt but that the damage is great, and unnecessarily so. With normal care and attention, this damage can be prevented. The products and methods for effective control are readily available.

But the feeling has been about for some time that the average housewife normally is not sufficiently conscious of the potential damage to take the necessary preventive steps in time. If she were more conscious of the problem, she would suffer far less damage to clothes, furs, carpets, rugs and the like, — and a lot more moth control products would be sold. In proportion to damage done, purchase of moth products to date has been niggardly.

With this in mind, the Moth Control Committee of CSMA plans to launch a publicity campaign aimed to reduce moth damage. Because of its educational and economic nature, full support from public agencies, magazines, newspapers, and other news media is anticipated. Any broadened market for moth control products will be strictly incidental, but is believed, quite material.

* * * * *

WAX FOR VINYL While the claim that vinyl floor coverings need no waxing has been disproved quite effectively in our humble opinion, we do not believe that the floor wax industry can afford to sit back and forget the matter. The industry spearheaded by the Chemical Specialties Manufacturers Association did an outstanding job in showing that vinyls

need wax for protection and good looks. We feel that this idea has been well accepted publicly. But there is still the problem of keeping it sold.

With some waxes, vinyl floorings present problems. They differ from linoleum, rubber, asphalt. These problems should be solved and can be, we believe, without too much study. In short, more attention should be given now by manufacturers to insure the maximum of best results in the use of standard commercial waxes on vinyls. If special waxes are needed for certain vinyls, their availability would aid in keeping vinyl floor waxers happy. More research on waxing vinyls should be the order of the day.

Faced with what could have developed into an ugly situation, the floor wax industry has done an excellent job thus far in protecting its interests. Let's keep an eye on the situation and make certain that these gains are not lost through lack of vigilance. They could be.


* * * * *

IT FLOATS Most everybody knows the story. The workman allowed the crutcher to run too fast and too long. Millions of small air bubbles were beaten into the soap and the finished product floated. That's how Ivory Soap became the first floating soap seventy five years ago. Procter & Gamble are making a big to-do about Ivory's 75th birthday and we don't blame them one bit. It's been one of the greatest pieces of merchandising and advertising in American history.

Away back about 1880, eleven thousand dollars was put into advertising by P & G. (Last year P & G spent over fifty million on advertising.) But at that time the big claim was purity, not "it floats." A New York chemist supplied an analysis of the soap,—it was original-

ly known as P & G's White Soap, — and on this was based the famous "99 44/100% pure." Believe it or not, this slogan was not registered with the U. S. Patent Office until early in 1954.


For years, attempts to ferret out the secret of Ivory's ability to float were unsuccessful. Its sales grew and grew. It became the most widely known soap brand in the world. Unlike so many famous soaps of yesteryear, it never lost its market position. Over the years, advertising and sales pressure never slackened. Once a bar of Ivory is supposed to have sunk and this was the subject of a famous cartoon of the "industrial crises" series. What ever happened to the fellow who let the crutcher run too long, we don't know. We wonder if he was fired.


 **INSECTICIDES . . .** Just how big is the household insecticide market today? Over the past few years, has it gone down, up or sideways? For some time past, we have been trying to find the answers—something akin to accurate answers to these questions. To know the extent and trend of demand and sales is obviously important to marketers. But our efforts have brought forth all sorts of conflicting figures. Our leading market authorities are not in agreement. Only in the case of aerosols do we find figures which are universally accepted. For other insecticide products, "you pays your money and takes your choice."

After batting this subject around for a long time, we have come up with some figures which at least may be set down here to be shot at by those who disagree. We estimate that the market for liquid household and industrial sprays of all kinds, including stock and moth sprays, approximated 25,000,000 gallons for 1953; aerosol insecticides totaled 45,000,000 units; para and naphthalene moth products were 70,000,000 pounds; all other insecticides probably totaled some three million dollars.

Well we know that surveys have been made, but our faith in such has fallen to rather low ebb. Our experience leads us to believe that honest surveys mostly err on the low side, sometimes badly, and that a survey under "controlled" conditions can be made to show almost anything the surveyor wants to show. We prefer expert market guesses, have found them sub-

stantiated more often. So, we are going deeper into this subject and expect to report in more detail at a later date. At the moment, our figure for the total retail value of all household and allied insecticides comes pretty close to \$120,000,000 per annum. More later on this.

 **BANDWAGON . . .** In the current rush of every Tom, Dick and Harry to climb on the aerosol band wagon, lies danger for the established and more substantial elements of the industry. To some extent, the aerosol boom in spots has taken on the complexion of the crazy DDT marketing rush of eight or nine years ago. That attracted many undesirable fly-by-nights to the insecticide field. The almost fantastic success of the pressure package could do the same thing. After the DDT "boom," the five-year aftermath was really sad, sad indeed. True, more level heads today guide the aerosol business. Let's hope that they continue to guide it.

 **COCONUT OIL . . .** As far back as ten years ago, we predicted that the three-cent processing tax on coconut oil not only would hurt the crushers of this oil, but in the long run would do irreparable damage to tallow, grease and other fats. We held that the increased cost of coconut oil would reduce its use in soap and place soap at a marked disadvantage in competition with synthetic detergents, would help to cut the use of all soaps.

To any such prediction, the renderers and the cattle people gave a knowing wink and tap of the forehead. That this coconut oil tax would hurt tallow was just too absurd to be given serious thought. For wasn't coconut oil the cheap fat produced in the Orient by slave labor which was aiming to drive domestic tallow and grease out of the soap kettle? Well, if things haven't happened along the lines of this prediction, as the renderers who fought to keep this tax on the books must know, then we're a monkey's uncle.

Now, in this year of 1954, a bill to repeal the coconut oil processing tax again is in the works. With our American copra crushing industry flat on its back, plants closed and unemployment mounting, they plan to try to undo the damage of twenty years overnight. If the tax is lifted, our only comment will be "it's about time."

as the reader sees it...

Best Detergency Article

Editor:

We would very much appreciate receiving six copies of the article, "Theory of Detergency," which appears in the May issue of *Soap & Chemical Specialties*. This is one of the best articles we have seen on the subject.

PRO-TEX-ALL Co.
Evansville, Indiana

Thank you for confirming our judgement. We, too, felt this to be an excellent explanation of a complicated subject. Incidentally, we have received

a number of similar comments on the article, which was written by Lawrence M. Kushner of the Surface Chemistry Section of the National Bureau of Standards. Ed.

Struthers Correction

Editor

In the May issue of *Soap* you published a news about John Struthers & Co., Ltd., Montreal, Canada, which stated that the company was "a subsidiary" of Sherwin-Williams Co., Ltd. This should have read "a supplier."

Would you please be good enough to issue a correction to avoid any misunderstanding.

K. A. MUNRO

Harold E. Stanfield, Ltd.
Montreal, Canada

We regret this error and are sorry for any embarrassment it may have caused. The release covering the announcement of the opening of the new Struthers plant did not refer to Sherwin-Williams, but the covering letter stated that the firm was "being subsidized by Sherwin-Williams Paint Company of Canada Ltd." This phrase was a typographical error Mr. Munro indicated in a later letter. Ed.

It Does So

Editor:

Attached is a copy of the *New York Times* wherein it was erroneously stated that vinyl tile "requires no waxing." Our letter to the "Home Editor" is enclosed, also a reply from the "Home Editor" admitting the error.

MILTON M. BLANK,
Trio Chemical Works, Inc.
Brooklyn

(Enclosure)

"Dear Miss Pepis:

"In your article and accompanying photographs, "Focus on the Floor" in the May 30th issue, you cover the use of various types of decorative floorings.

"I found the article very interesting and enlightening, especially in covering the use of certain materials which are new to me.

"However, in writing about the vinyl flooring you mention that it requires no waxing. This statement is contrary to facts as they now stand. Foster D. Snell, Inc., the well known consulting firm, has established that the wearing qualities and appearance of vinyl floors are greatly enhanced by periodic waxing, as are other floorings such as linoleum, asphalt and rubber tile.

"The scientific work covering the use of wax on vinyl flooring has been published in the *Proceedings of the 39th Mid-Year Meeting and the 40th Annual Meeting of the Chemical Specialties Manufacturers Association*.

"In this connection you might be interested to know that in view of Snell's work, many of the manufacturers of vinyl flooring no longer claim that this type of surfacing requires no waxing for proper maintenance."

Very truly yours,
KURT J. WASSERMAN,
Chief chemist,
Trio Chemical Works, Inc.

A copy of Miss Pepis' reply to Mr. Wasserman follows:

(Turn to Page 153)



INDUSTRIAL CRISES

The day a cake of soap sank at Procter & Gamble's

The famous *New Yorker* cartoon of 1928, which came true in 1944, when a cake of "Ivory" soap actually sank. Other "Ivory" sinkings were revealed recently in connection with the soap's 75th anniversary. See story on Page 44.



One of the perfume "organs" at the research laboratories of Lever Brothers Co. in Edgewater, N. J.

Soap and Detergent Perfumery

PERFUME plays an important role in a wide variety of consumer goods where its function is to increase the acceptance of products by rendering their use more pleasant. Measured by this yardstick an appealing fragrance is a forceful sales agent for the product in which it occurs. Since the perfuming of soaps and detergents consumes such a large proportion of the total volume of aromatics production it is appropriate that we consider those aspects of this branch of perfumery which are of importance for the formulation of the correct fragrance.

A discussion of the practical and effective perfuming of functional products must deal with such factors as suitability of fragrance type, compatibility with base or

stock odors, stability in the medium, as well as availability and cost. It may be assumed that a correctly formulated perfume will display a fragrance whose character is in harmony with the product function. It will also provide maximum disguise for any undesired odors which exist in the unperfumed product. Furthermore, it will resist any chemical or physical changes which during normal aging would significantly alter its fragrance profile.

In the soap and detergent field as in other branches of functional product perfumery, there is seldom complete choice of odor type despite the many hundreds of listed aromatic chemicals and natural perfumery materials. Each of the factors which have been mentioned exerts a restrictive influence.

Nearly all products in the detergent field exhibit some odor when perfumed. This observation should not surprise one since olfactory stimulus is provided by many common materials. Odors associated with soaps arise from tallow, coconut and other oils. Many synthetic detergents contain odorous substances such as petroleum derivatives occurring with alkyl aryl sulfonates or aliphatic alcohols found in the alkyl sulfate salts.

The existence of these odorous impurities in low concentration should not be taken as evidence of substandard quality, for there is an economic barrier of cost which limits the extent to which a raw material can be purified. Some odor control, however, is necessary to minimize off odor occurrence, and many manufacturers of raw



By
E. D. Kilmer*
Ever Brothers Co.

materials for the consumer goods industry do recognize such a need. It is important that product development groups within our industry realize the extent to which proper selection of raw material sources can lessen stock odors and the fact that formulation or processing changes designed to reduce off-odor may be more economical and effective than use of additional perfume solely for its masking effect. Since stock odors do exist, perfumes should be formulated to blend with and, if possible, utilize their enhancing action or they should provide maximum blanketing value where the nature of the odor demands it.

Although the choice of a

*Paper presented before the Scientific Section of the Toilet Goods Assn. annual meeting at the Hotel Waldorf-Astoria, New York, May 13, 1954.

fragrance is influenced by a demand for compatibility with or masking of base odors the selection should also be guided by knowledge of the circumstances of use of the product. It is almost obvious that soaps and detergents should display clean odors. We may assume that a housewife will be more receptive to claims of superior cleansing action if the fragrance of the product suggests cleanliness. Laundry soaps and detergent powders appear more effective if sweet clean odors are retained on clothing. Perfumes for dishwashing detergents should also exhibit clean refreshing scents, yet possess such a low degree of retention that the user will not suspect their being held on tableware or cooking utensils.

Toilet soaps because of their normally low level of base odor and manner of use may be perfumed from a wider choice of fragrances. This is particularly true of luxury products which assume in some degree the function of bath essences, imparting fragrance to bath and skin. Even here the acceptance of the perfume may benefit from a perceptible suggestion of cleanliness in the blend.

Stability of the selected perfume is a function both of its composition and of the soap or detergent base into which it has been incorporated. High volatility and reactivity between perfumery components are to be avoided for a constant odor profile. Although the greater number of perfume chemicals and oils are sufficiently stable to allow employment in soap and detergents, some undergo chemical change with resultant loss or alteration of odor.

For example, the many aldehydes exhibit several degrees of stability. Vanillin and phenylacetaldehyde are among the least stable even in the low alkalinity found in toilet soaps. The former discolors soap markedly and loses a large proportion of its odor intensity acquiring simultaneously a rubber-like note. The second chemical is

an active promoter of rancidity. Citral and cinnamaldehyde, particularly in the purified forms, react to lose some intensity and cause yellowing of white soaps. Another group of aldehydes including hydroxycitronellal and some members of the aliphatic or fatty series benefit from incorporation with alcohols because of a reduced tendency to promote rancidity in the soap base.

Another important factor in perfume stability is the resistance of the soap or detergent base toward rancidity development. Few odorant blends will remain unaffected while peroxide formation proceeds in the lipophilic portion of the detergent molecule. The resultant deterioration of the product odor is due both to formation of malodorous chemicals from oxidation and destruction of sensitive osmophoric groups occurring in the perfume. Therefore, it is important that attention be directed to adequate preservation of the base in order to minimize deterioration.

As we review the various factors pertaining to perfuming of soaps and detergents, it is evident that compounding will be facilitated by knowledge of the extent to which an odorant can contribute to the objectives which have been presented. Except for instances of unexpected incompatibility between raw materials determination of the behavior of each perfume material in the product will be of material help in formulating the correct fragrance. This predictability can be achieved through the use of a simple test procedure. To illustrate its operation I shall describe the method as it can be employed for soap or detergent powders. However, it can be extended to other physical forms such as a liquid, cream, flake or tablet, although the methods of incorporation will differ.

Described in simplest terms the method requires incorporation of a perfume material in the detergent powder at a level somewhat above its perception threshold value. The perfumed powder is then stored

under normal and accelerated aging conditions. At the conclusion of a suitable period the test and control powders are compared for alteration of odor.

Experience with the method suggests that it is worthwhile to discuss it in greater detail and to present some of the precautions which should be observed for its successful application.

A quantity of unperfumed powder is treated with a suitable concentration of test deodorant. Levels which we have found useful are 0.10% and 0.01%, the former for materials of moderate odor intensity such as phenyl alcohol and amyl cinnamaldehyde. The lower concentration is reserved for odorants displaying intense or harsh odors. The minimum volume of powder for each test is that quantity needed to fill two standard cartons; two kilograms of powder is a convenient amount. The condition of the powder is also important, for variation in properties which are affected by age such as moisture content, surface composition and amount of volatile impurities can influence odorant behavior. Therefore, it is desirable to obtain fresh production powder the odor and moisture of which are within standard limits and to perfume it promptly.

In the preferred method for incorporation of the test odorant the recommended two kilograms of powder is weighed. Then into a 50 ml. aliquot from powder sample is weighed dropwise, either 2.0 or 0.20 grams of the odorant, the quantity being dependent upon whether 0.1 or 0.01 percent is the selected concentration. Solid odorants may be added as a concentrated solution in an odorless solvent such as diethyl phthalate. The liquid is readily absorbed with stirring, the powder remaining slightly damp but pourable. The bulk of the powder sample and the heavily perfumed mixture is transferred to a tumbler type mixer for blending. A V shape plastic shell

motor driven mixer is available which will perform the required mixing during a five minute period without significant alteration of the physical properties of the powder. Homogeneity should be sought although intimate contact of odorant with each particle of powder appears unnecessary. We have found that this method of weighing the odorant into an aliquot powder provides results similar to those obtained by spraying the odorant on the powder but requires less weighing and handling of equipment.

When blending has been completed the powder is placed in two standard cartons approximating normal outage and packing weights. Closure may employ adhesive strips for top sealing but bottoms should be glued. One carton is placed in storage at 40°C for accelerated aging and the other or control carton is held at 20-25°C. At least 50% relative humidity should be maintained at the higher temperature since both heat and moisture adversely affect product stability.

The storage period can vary from two to four weeks depending upon the time allotment for the testing program. The longer period will provide a larger behavior differential although we have some evidence for equivalence of product behavior between two weeks at 40°C and six months at the control temperature.

The cartons should be stored in such a manner as to simulate case storage but to minimize odorant permeation. This can be achieved by shelf storage using a single thickness of aluminum foil

wrapping covering the four sides of the carton but not the ends.

At the conclusion of the storage period the cartons are allowed to return to room temperature and the value of the separate perfume materials appraised by comparison of the odors of the test and control powders. The relative odor intensity, similarity of fragrance and capacity to disguise base or stock odors are important.

Two methods of evaluation are suggested. Alteration of intensity and fragrance can be ascertained by inspection of the odor of the powder in the cartons. Masking capacity and suitability of fragrance can be properly judged only by observation of the odor arising from a fresh solution of the powder in hot water. Approximately 3-5 grams of powder in a liter of water at 75°C will serve for examination of these features.

Since these appraisals are subjective they display the low order of precision inherent in all olfactory perception. Accordingly checking of initial observations is desirable. Furthermore, because of fatigue it is recommended that no more than ten comparisons be performed without rest and that all be conducted in an odor clean atmosphere. Recording of changes in fragrance characteristics should employ numerical indices which need not exceed a range of one to four. A suggested terminology for recording results is shown below.

After recording in index form the observations from a series of tests the investigator will have a guide to the most effective odorants. A high rating in any category (Turn to Page 163)

Index	Stability	Masking	Fragrance
1	No significant loss of intensity or change in odor.	Effective disguise.	Fragrant—suitable for a leading note.
2	Intensity loss but no change in odor.	Base note odor perceptible.	Useful as secondary or modifying note.
3	Significant odor change	No masking of base odor.	Little fragrance value.
4	Complete loss of odor.	Intensifies base odor.	Unpleasant odor.

GLYCERINE

**New and expanding uses in chemical specialties
for a traditional and tested raw material . . .**

By Milton A. Lesser

MANY materials enter into the manufacture of modern chemical specialties. It is safe to say, however, that few substances find as many and as varied applications as glycerine.

Moreover, as a check of the recent technical and patent literature shows, the development of new products like the aerosols, or improvements in old ones, serve to extend the usefulness of glycerine. And a new raw material introduced into the specialties field often requires the use of glycerine for the one or more characteristics it may lend to the formulation built around the new material.

As is well known, the adaptability of glycerine to a wide variety of products is due to its unique combination of physical and chemical properties. Perhaps the outstanding property of this clear, heavy, viscous fluid is its hygroscopic or humectant action. Through this ability to attract and retain essential moisture, glycerine combats undesired crystallization, brittleness, hardness and drying. Its humectancy, too, is closely associated with its ability as a plasticizing and softening agent. In addition, because of its low vapor pressure, glycerine "stays put" and continues to function efficiently over a wide range of conditions; at the temperatures normally used, glycerine is practically non-volatile.

A highly compatible substance, glycerine is a good solvent for many chemicals. For materials that do not go into solution, glycerine's viscosity often provides

good suspending action. This property is also valuable where it is desired to give "body" to liquid preparations. A physiologically wholesome material, glycerine provides highly desirable emollient and soothing properties to such personal specialties as skin cleaners, protectives, and insect repellents.

Cleaners and Polishes

THE physical properties of glycerine have been put to extensive use in the formulation of many types of surface cleaners and polishes. Thus, in a patent in which they describe the production of emulsion type combination cleaners and polishes, Boe and Lowstuter (1) go into details on the desirability of including glycerine in such preparations.

Glycerine, they say, helps to cut down the tendency of some polishes to streak or leave rubbing marks. It thereby makes possible a brilliant shine to be given to any surface being treated. When abrasives are included in a formula, glycerine also prevents the abrasive particles from absorbing oil from the mixture and thus renders the composition more effective. Glycerine also decreases the drying rate of the compositions when applied to various surfaces. This is desirable in warm weather in order to obtain a suitable cleaning effect.

The glycerine-containing compositions described by Boe and Lowstuter are useful on lacquered or varnished surfaces, such as automobile bodies, and on metal, glass, and plastics. They restore the original luster and deposit a thin, dur-

able, highly lustrous and transparent protective film. Several typical formulas are given to illustrate the production of such compositions; the following is among those that give "highly satisfactory" results:

70% chlorinated	
paraffin	5.0 per cent
Butyl stearate	5.0 " "
Mineral oil, light	15.0 " "
Polyvinyl alcohol	0.2 " "
Glycerine	3.0 " "
Water-soluble emulsi-	
fying agent	0.5 " "
Water	71.3 " "

Also illustrative of glycerine's utility is the following basic formula for polishes for non-metallic surfaces (2):

Kieselguhr	12-15 parts
French chalk	10-20 "
Calcium carbonate,	
powdered	9-12 "
Glycerine (4% aqueous	
solution)	50-80 "
Alcohol	4-5 "

Among more familiar specialized preparations, it is found that glycerine is frequently specified in newer glass cleaning, polishing and anti-dimming preparations. For example, an anti-dimming composition can be made by warming 100 parts of a five to 30 per cent solution of dodecyl sodium sulfate at 70° C., adding 30 parts of glycerine, and mixing. When foaming ceases, cool rapidly to 10° to 14°C. and let stand for at least one day. If desired, dyes may be added to the preparation (3).

Glycerine-containing preparations for glass surfaces are supplied as liquids, pastes, sticks and

impregnated cloths and papers. They may now also be provided as aerosols. Thus, a low pressure propelled window and glass cleaner (4) may be made from:

Detergent (Duponol WA paste)	5.0 per cent
Tannic acid	1.0 " "
Glycerine	5.0 " "
Perfume	0-0.1 " "
Water	89.0-88.9 " "

Ninety per cent of this composition is packaged with 10 per cent of a "Freon 12-Freon 114" mixture. The product is ejected from the container as a foamy spray. The foam is spread thoroughly over the surface to be cleaned and removed by rubbing with a dry cloth until dry. This cleaner not only removes soil but also leaves a film on the glass that imparts an anti-fogging effect to the surface. While this effect is not permanent, it is useful for treating the inside of car windows, show windows, bathroom mirrors and the like.

Another aerosol use for glycerine is given by Eiseman (5) in his list of effective additives for stabilizing wax aerosols against creaming. Here glycerine contributes to the effectiveness of spray-wax formulations just as it does to other types of wax polishes.

Glycerine's value in such polishes is covered in Wood's (6) discussion of auto polish formulations, in which he offers the following procedure for making a paste polish suitable for use on both paint and metalwork:

Rosin	3.0 parts
Carnauba wax	4.0 "
Paraffin, 140°F	7.0 "
White spirit	36.0 "
Bentonite	6.0 "
Soda ash	3.0 "
Glycerine	3.0 "
Water	38.0 "

Melt the waxes and thin with the white spirit. The bentonite is made into a paste with a small amount of water. More water is gradually added to the bentonite paste, the balance being incorpor-

ated as a solution of the soda ash and glycerine. This aqueous mixture is gradually added to the wax-solvent combination in a thin stream with thorough and continuous stirring.

When poured into cans, this product sets to a smooth, relatively soft paste. The product is a particularly rapid polisher and gives good results on old, worn and pitted paint, as well as metalwork. Its evaporation, says Wood, is controlled by the glycerine, the proportion of which may be increased if any tendency to dry too rapidly is noticed.

This last confirms the views of experienced polish makers who know that the addition of glycerine is of benefit because it prevents the polish from drying completely before the polishing-off operation. The presence of glycerine in the product not only speeds the polishing job by keeping the polish just moist enough to handle easily, but it also increases the gloss and lengthens the life of the job.

Stain Remover

GLYCERINE, as such or in simple dilution, is a valuable substance for removing medicinal, coffee, tea, fresh fruit, berry, mustard and other stains from fabrics. It is not surprising, therefore, that it should be a major ingredient in the widely useful composite stain remover described by Smith (9). This dry-cleaning aid is made as follows:

Glycerine	4.00 parts
Acetic acid, glacial	0.75 part
Methyl alcohol	1.00 "
Lactic acid	1.00 "
Amyl acetate (C.P.)	1.00 "

Mix these ingredients and add three to five drops of either dilute hydrofluoric acid or a proprietary rust remover. Then add the smallest quantity of butyl alcohol that will give a clear solution. After this add 0.5 part by volume of oleic acid. This last addition will require several hours to go into solution completely.

This preparation, often called the "General Formula" in the trade, is safe on rayon, silk, cotton and acetate fabrics, but before use on the latter, it should be tried on a sample of acetate satin. The solution is said to be effective for removing tannin stains, such as those caused by coffee, tea, beer, cola beverages, ginger ale, and other soft drinks. However, if the tannin stain is well oxidized it will be hard to remove with this preparation or by other methods. In addition, the solution is effective against many fruit, ink and dye stains, and is said to be reasonably safe on most dyed fabrics.

Polish Paper

MODERN formulations for other types of polishing products continue to incorporate glycerine. Typical is the procedure developed by Jones (7) for making a paper that is suitable for dusting and polishing furniture and the like: impregnate a high wet-and-dry-strength paper sheet with a stable emulsion containing a non-drying oil and glycerine.

As illustrated in this preferred formula, which depends on a combination of surface active agents for superior results, the impregnant is prepared in two stages:

Solution A:

Mineral oil	100.0 parts
Sorbitan trioleate (Span 85*)	5.0 "
Polyoxyethylene sorbitan monooleate (Tween 81*)	5.0 "

Polyoxyethylene propylene

glycol monostearate (G-2150*)	1.0 parts
(*Atlas Powder Co., Wilmington, Del.)	

Beat these liquids together at room temperature until dissolved.

Solution B:

Glycerine	100.0 parts
Water	500.0 "

Mix the glycerine and water and stir at a temperature of from 40° to 80°C.

A stable emulsion is formed

by adding solution A to solution B with rapid stirring.

After impregnation with such an emulsion, the dusting and polishing paper sheets are soft and cloth-like, substantially dry to the touch and capable of further impregnation. Although other humectants may be used as plasticizing agents, Jones states that glycerine is preferred for this purpose because of the "outstanding results obtained with it."

Surface "Prep"

OF quite a different nature is a jelly-like cleaning composition for removing oxides, scale and other foreign material from metal surfaces. This may consist of:

Sodium silicate (10% aqueous solution)	30.0 parts
Hydrochloric acid (Sp. gr. 1.19)	60.0 "
Phosphoric acid (75% aqueous solution)	5.0 "
Copper sulfate (25% aqueous solution)	5.0 "
Glycerine	1.0 "

Burke (8) particularly recommends this acid gel for readying used automobiles for repainting. He claims that it penetrates deep recesses of shaped metal forms that cannot be reached by hand operations. The treatment promotes better paint adherence.

Caulking Compounds

OF course many types of chemical specialties, other than cleaning and polishing compositions, make good use of glycerine's varied properties. For example, its efficient plasticizing properties are finding extensive use in some of the newer wood fillers and caulking compounds. According to a German patent (10), the treatment of urea-formaldehyde condensation products with five to 20 per cent by weight of glycerine yields a glue or wood filler which is much less brittle and more elastic than products made with untreated resins of this type.

In describing the production of improved caulking com-

pounds, Taylor (11) states that the following mixture yields a stiff putty-like paste that can be spread easily:

Asbestos, finely shredded	27.0 per cent
Bentonite, powdered	14.0 " "
Coquina, finely powdered	10.0 " "
Glycerine	27.0 " "
Hydroxy ethyl cellulose aqueous solution (70-100 cps.)	22.0 " "

On exposure to air this material stiffens to a plastic condition. If again brought into contact with water, the material becomes soft and swells sufficiently to close small cracks and crevices.

Dust Catchers

GLYCERINE spread on glass slides and exposed to the atmosphere has long been a simple means for determining the pollen and dust content of the air. It is logical, therefore, that this ability to hold such particles should find application in the production of adhesives for dust filters.

Indicative of this use is Brander's (12) procedure for making smoke- and fire-resistant liquid dust-catching adhesives that are suitable for impregnating or coating the porous filtering media in air conditioning, heating, ventilating and similar systems. Such compositions consist essentially of solutions containing five-40 parts of an acid component, made up of 100-70 per cent phosphoric acid and 0-30 per cent of boric acid in 100 parts of a polyol component, consisting of 90-75 per cent glycerine and 10-25 per cent ethylene glycol.

Quite similar are the dust filter adhesives developed by Jefferson and Stigger (13). An example of one of their compositions is as follows:

Glycerine	37.2 parts
Ethylene glycol	12.4 "
Sorbitol	27.4 "
Phosphoric acid (85%)	23.0 "

The resulting composition,

designed for use on glass-fiber or mineral-fiber filters, is adjusted to the filter by spraying. It is said to be extremely flame resistant.

Artificial Sponges

ANOTHER new and interesting use for glycerine is in the production of plasticized artificial sponges. According to one process (14), the cellulose material is treated, during the manufacture of the sponge, with a glycerine solution and hygroscopic salts, such as magnesium chloride, and dried to the desired softness. In the case of preformed products, the hard sponges are allowed to swell in a solution containing ammonium chloride and glycerine. They are then pressed and immersed into a magnesium chloride solution.

Similar procedures are used by Wilson (15) to plasticize sponges made from partially formalized polyvinyl alcohol and make them more attractive to prospective purchasers. Although glycerine alone may be used for this purpose, it is preferable to use it in combination with other plasticizers. For example, dry sponge material containing an equal weight of the following mixture remains flexible when exposed to the air:

Glycerine	73.0 parts
1,3-Butanediol	90.0 "
Water	144.0 "

"Personal" Specialties

GLYCERINE obviously holds an important place in what might be called the personal chemical specialties, like hand cleaners, skin protectives, and insect repellents. Because of its many beneficial properties, glycerine imparts "plus" effects both to the product and the skin.

Glycerine's emollient action on the skin and its hygroscopic action to prevent drying in the tube or jar account for its frequent use in the production of hand cleaners. This helps to explain why, during recent years, glycerine has entered so extensively into the formulation of newer types of waterless hand

cleaners. For example, in explaining the function of glycerine in his gel-like product, Guastavino (16) remarks that although it is not essential from the standpoint of the detergent action of the composition, a small amount of the fluid is advantageously added to the composition to improve its general effectiveness upon the skin. Its use is illustrated in the following example:

Oleic acid	20.0 parts
Mineral terebinth essence	110.0 "
Ammonium hydroxide (10%)	8.5 "
Sodium hydroxide (20%)	5.0 "
Water	15.0 "
Glycerine	2.0 "

The "mineral terebinth essence" in the above formula is a petroleum hydrocarbon fraction having a boiling range of 130° to 190°C. This composition is designed to remove dirt, grease, and oils from the skin without the use of water. The gel liquefies when rubbed on the hands and may be wiped off with a cloth or paper towel.

A rub-off hand cleaner, based on polyvinyl alcohol, contains a much higher proportion of glycerine (17). Such a cleansing composition, in the form of a viscous, aqueous mass that can be dispensed from a tube, is made from:

Polyvinyl alcohol	15.0 parts
Triethanolamine soap	5.0 "
Glycerine	10.0 "
Water	20.0 "
Perfume	sufficient

Of related interest and also utilizing polyvinyl alcohol with glycerine as a plasticizer, is Rue-mele's (18) procedure for making soap sheets or films. His process utilizes:

Toilet soap	77.0 parts
Polyvinyl alcohol, partially esterified with acetic acid	19.0 "
Glycerine	4.0 "

The emollient properties of

glycerine as well as its ability to plasticize the protective films account for its extensive use in skin protective or barrier creams. Thus, in a study of industrial barrier creams for the protection of workers against solvents, one European worker (19) found that three glycerine-containing formulations were most effective skin protectives. One of these preparations consists of:

Gelatin	4.0 parts
Glycerine	30.0 "
Water, to make	100.0 "

Also illustrative of the use of glycerine is another type of cream for protecting the hands from fats, oils, dyes and hydrocarbons (20). This is prepared from:

Stearic acid	10.0 parts
Lanolin or beeswax	1.5 "
Glycerine	5.0 "
Casein	0.3 "
Ammonia	0.5 "
Water	35.0 "

Of current interest to those concerned with disaster control work are DeMent's (21) compositions for protection against atomic flashes. According to the claims in his patent application, these preparations are designed for application to the outer surface of the body to lessen some of the injurious flash effects of an atomic explosion. For this purpose, thermal reflecting substances are included in the preparations, aluminum powder being the preferred material. Glycerine is used in both lotion and cream type protectives. For example, an aqueous lotion may be made from:

Aluminum	10.0 parts
Magnesium oxide	5.0 "
Methyl salicylate	8.0 "
Glycerine	7.0 "
Water	70.0 "

DeMent suggests that a protective cream or ointment can be made along the following lines:

Aluminum	4.0 parts
Lanolin	2.0 "

Petrolatum	8.0 parts
Glycerine	4.0 "

The foregoing, which covers developments of only the last few years, shows that glycerine is a common ingredient in a wide variety of chemical specialties. As this fast-moving chemical specialties industry continues to grow and foster new types of products, glycerine can be expected to extend its utility further.

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Lueders Honors Veteran

George Lueders & Co., New York, recently welcomed Robert Leclerc as the 55th member of its veterans organization. Mr. Leclerc, head of the firm's Montreal shipping department, has completed 25 years with the company. He received the usual membership pin, gold watch, and gifts from the officers and his fellow employees and was guest of honor at a party.



Soaps and Synthetic Detergents ?



By Allen W. Smith*

Dow Chemical Co.

ALL of us are more or less familiar with what is meant by a surface active agent or surfactant. They are soluble substances whose presence makes the surface properties of a solution markedly different from those of the pure solvent. The importance of activity at surfaces can be emphasized when one realizes that detergency, the cleaning process, involves a number of complex actions occurring at the surface of the material to be cleaned, at the surface of the soil and at the surface of the medium in which the cleaning takes place.

Most surface active agents have a linear molecular structure. By that I mean that they are considerably longer than they are wide. One portion of the molecule is composed of water loving (hydrophilic) groups, while the other portion of the molecule consists of an oil hating or water repelling (hydrophobic) group. Soap, the best known and probably the oldest surface active agent, is a good example of this structure. Surface activity has been most extensively studied and exploited in aqueous systems. Thus, most surface active agents are water soluble. The synthetic surface active agents represent attempts to imitate the action of soap in soft water without inheriting the

major disadvantage of soap—the formation of insoluble salts when mixed with the calcium and magnesium ions in hard water.

Surface active agents are found in a variety of forms in the corner grocery store. The classical form for soap is in the shape of a bar. Grandma used this bar for all sorts of cleaning processes around the home. Perhaps she even made the soap herself. Today, however, highly purified, pleasantly perfumed, attractively packaged bars of soap are readily available in the stores but are used primarily for personal cleanliness. One of the newer developments in the industry involves the formation of bars based on synthetic surface active agents. As with soaps these will almost exclusively be used as toilet soaps but they have the advantage of giving uniform lathering in all kinds of water without leaving the proverbial "ring around the tub". A number of the synthetic bar detergents on the market at the present time leave much to be desired, however, and one possible answer to this is to study further the blending of soap with a synthetic surfactant in bar form.

Mostly Spray Products

THE early ground, powdered detergents have essentially been replaced by spray dried products which are more uniform in appearance, dissolve more rapidly,

give less dust and are more uniformly blended. These products may be classified as light duty or heavy duty detergents. Basically a light duty syndet formulation consists of 25-35 percent surfactant which is called the active ingredient, 65-75 percent of sodium sulfate, a neutral salt, and usually small amounts of additives such as perfuming materials and suds stabilizers. The sodium sulfate which makes up a predominant part of the formulation is a builder. By that I mean that a mixture of the active ingredient and the builder can actually have as much or more detergency power as an equivalent weight of the undiluted active material. Of course, this type of builder is also very inexpensive and helps to lower the price of the formulation. The light duty syndets are acceptable for dishwashing and the laundering of fine fabrics and they compete directly with unbuilt soap flakes.

For cottons and heavy duty laundering, the light duty products are relatively ineffective. In the first place they just do not have the required cleaning power and secondly the syndets allow an unacceptable amount of redeposition of the soil on the fabric after it has been removed by the detergent. In the heavy duty syndet formulation a small percentage of sodium carboxymethylcellulose, commonly known as CMC, is incorporated to

*Based on a paper presented at the Seventh National Home Laundry Conference sponsored by the American Home Laundry Manufacturers Assn., Nov. 5, 1963.

minimize redeposition. In order to increase detergency, alkaline builders such as tetrasodium pyrophosphate or sodium tripolyphosphate are incorporated in the formulation. These phosphate builders assist in softening the water, cutting grease, act as soil dispersants and have some anti-corrosion properties. Silicates and complex organic compounds are also often included in formulations as corrosion inhibitors. A typical heavy duty syndet formulation might consist of 20-30 percent of the same active ingredient as is used in the light duty products, 30-50 percent phosphate builder with the balance consisting of neutral builders such as sodium sulfate and small amounts of additives such as fluorescent dyes, carboxymethylcellulose, anti-corrosion agents, and foam boosters and stabilizers.

A fluorescent dye or optical bleach is an organic compound which emits visible light under the influence of ultraviolet light, which is one of the invisible parts of the spectrum. When the optical bleach is deposited on a fabric, it fluoresces so as to give the fabric a cleaner and brighter appearance. The optical dye is the basis for the claim that clothes can be made whiter than new through the use of one of these detergents. Heavy duty soap formulations, built with alkaline salts, compete directly with the heavy duty syndets.

A number of manufacturers have introduced or are contemplating the sale of tinted granular syndets. This seems to have a psychological appeal for the housewife and so we may see more products of this type. Another recent trend is in the direction of more widespread use of multi-component active ingredient systems. Each component imparts its own desirable features to the formulation.

One of the newer forms of synthetic detergents is the liquid detergent. These products are particularly well suited for dishwashing and other light duty applications. Within the last year, they seem to have achieved widespread

acceptance. The liquid syndets consist primarily of alcohol and water solutions of the active ingredient. The active ingredient may be similar to that used in the granulated detergents except that it has been modified to give increased water solubility.

Since their introduction in the 1930's, the syndets have enjoyed a spectacular rise in sales and have now gone ahead of the volume of soap sales. For granulated household detergents we are told that syndets account for more than 75 percent of sales at the present time. Although the syndets go farther in hard water, they are higher priced and probably not as mild to the skin. While we can confidently predict that the syndets are here to stay and will probably gradually continue to obtain a larger share of the market, it seems reasonable to conclude that soap is also very much alive and is not one of those materials that our grandchildren will know of through the history books. Even the most optimistic syndet boosters would hesitate to place soap in the time capsule to be opened 100 years from now so that subsequent generations can marvel at the relics of the past.

Future Outlook

IN connection with syndet formulations, we see, as we have previously mentioned, increased popularity of heavy duty type formulations as opposed to the light duty products. One improvement in heavy duty formulations which is of particular concern to the home laundry manufacturer's group would involve the development of superior corrosion inhibitors. We understand that there is a need for better corrosion inhibitors which would protect washing machine parts and prevent unnecessary breakdowns. This problem will undoubtedly be solved through the combined efforts of the appliance manufacturers and the detergent industry. The optical dye contained in some of the heavy duty formulations is not stable in the presence of the more conventional bleaching agents.

This is the basis for the claim that some of the heavy duty products wash better without bleaching than competitive products wash with bleaching. In any case stable optical dyes will have to achieve widespread use to overcome this disadvantage. Another major improvement in detergent formulations could be effected if their action on the skin could be reduced. While the extent of this problem is sometimes exaggerated, it does exist and milder action on the skin would be a desirable plus.

The use of biologically active compounds as bactericides or bacteriostats in syndet formulations has been the subject of study by the leading formulators. The ideal sanitizer would be strongly attracted to clothing and dishes, would have a very low order of toxicity, would act rapidly and would not adversely affect the other characteristics of the formulation. Higher water temperatures encountered in automatic dishwashers and clothes washers certainly destroy many of the bacteria; however, some authorities feel that more complete destruction of the bacteria would be an improvement. Another point to consider here is that many housewives do not operate their washing machines at high enough temperatures to give maximum cleaning efficiency and sanitizing action.

The larger formulators of detergents give considerable thought to packages for their products and one of the ideas on which some exploratory work is being done involves the development of a water soluble film as a packaging medium for granulated products. By this device a pre-measured quantity of the detergent could be added to the washing machine without removing the detergent from its package. This possibility is complicated by the variation in the capacity of the commercially available machines. We are told that this capacity ranges from seven to 17 gallons.

The industry as a whole is closely watching the progress of the so called low sudsing formulations which are being promoted for use

in automatic washing machines. Many of these formulations are similar in composition to the high sudsing products except that a low foaming active ingredient is used. While there seems to be general agreement that controlled sudsing is essential for automatic dishwashers and tumbler type clothes washers, there is a controversy over whether foam is desirable in the vertical basket type of clothes washer. In any case all agree that it will take an extensive re-education program to convince the housewife that foam is not necessary.

At present the largest soap companies are testing new low sudsing detergents, although the size of the potential market is still a subject of speculation. An important consideration in connection with the low sudsing formulations is that a number of the appliance manufacturers are specifically recommending these products for use in their machines. Perhaps this sort of approach will lead to closer cooperation between the detergent formulators and the appliance makers for future developments.

An interesting possibility which I am sure is receiving much attention in the industry centers

around the development of a heavy duty liquid detergent. Such a product would have obvious advantages if it was desirable to dispense the detergent automatically into the washing machine. The lack of dustiness and ease in pre-measuring the amount used would also be an advantage for other household uses. As far as we know the problem of formulating a heavy duty liquid detergent has not been resolved yet.

We can also expect improved packages for liquid detergents. Many of the present packages for liquid products are breakable and are not provided with any convenient device for dispensing the contents of the package.

Another source for considerable speculation in the detergent industry is concerned with the development of new types of automatic washing machines. We have all heard about the experimental washing machines utilizing the principle of ultrasonic waves. At other times I have heard people discuss washing machines utilizing non-aqueous solvent systems and other devices in which soil is removed from the fabric by bubbling air and a detergent solution through the material, thus largely eliminating mech-

anical wear on the clothing. The research staffs of the appliance manufacturer have certainly investigated the possibility of adding a hot water heater to the clothes washers. I am sure that design of washing machines based on the counter current principle has also been attempted since this is generally preferred over batch operation. These innovations may or may not eventually become commercial realities but, in any case, they represent a challenging problem to the detergent formulator since specific formulations will undoubtedly have to be developed for any type of washing action which deviates markedly from techniques presently used.

I do not intend to get embroiled in the pros and cons of using soaps and syndets. Nevertheless, a few comments on this subject are appropriate. The detergency of both soaps and syndets is adversely affected by hard water, but soaps without the addition of softeners, tend to curd and leave "tattletale gray" on clothes. This graying is not caused by redeposition of the solid soil since soap is a good anti-redeposition agent. Aside from this, most synthetics are more efficient at lower temperatures, although like soap, they perform best at higher temperatures. In soft water, soap is extremely difficult to beat or even equal for many household cleaning operations. Even in hard water areas the use of soap can sometimes be justified at present by virtue of its lower price and its milder action on the skin.

The battle between soap and syndets does not allow either product to stand still. It is not difficult to foresee technical developments which could increase soap sales. As the use of water softening systems becomes more widespread in the home, there is every reason to believe that soap will make a comeback. The development of improved, low cost lime soap dispersants and sequestering agents would be a boon to the soap makers. Unfortunately, these additives do not

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Two of the more recent entries in the low sudsing detergent field are "Vim," made by Lever Brothers Co., New York, and "Dash" of Procter & Gamble Co., Cincinnati. Both products are featured

for their efficiency in automatic washing machines. Colgate-Palmolive Co., Jersey City, N. J. is now test marketing its low sudsing detergent, "Ad," and is expected to go national shortly.





"It Floats" — Legend has it a workman left a crutcher running when he went out to lunch, and as a result air bubbles gave the then "P&G White Soap" bouyancy and a new name. Sales soared 950% in ten years.

IN this, the year of its 75th anniversary, sales of "Ivory Soap," made, of course, by Procter & Gamble Co., Cincinnati, will be greater than ever before in history. In spite of the amazing growth of sales of synthetic detergents "Ivory," the white floating soap that is probably the most familiar household product in America, is the only soap in successful competition with every other soap and detergent on the market. This is the claim put out for it by its manufacturer, but who is there to dispute it?

One of the most remarkable things about "Ivory" is the fact that while wages and taxes today are equivalent to 40 times the wages and taxes of 75 years ago and with raw material prices three times what they were, a cake of "Ivory" that cost five cents in 1885 costs less than 10 cents today. And it is a better product than ever.

Originally "Ivory" did not float. Prior to 1879 "Ivory's" main advantage lay in its whiteness and purity. At that time laundry soap was yellow from the rosin introduced to make it lather. Castile soap, of course, was white, but it was imported and expensive and largely a luxury for the carriage trade.

Legend has it that one day a company workman was operating a crutcher and left the machine running when he went to lunch. Exactly what happened next is not clear, 117 year old Procter & Gamble Co. admits in the 34 page background press booklet issued for "Ivory's" 75th anniversary. The likeliest story, according to the company, is that the workman, being the kind of a fellow who would leave the machine running, he simply turned it off when he came back, scratched his head for a while and then let the soap be processed with all the rest. Soon after dealers up and down the Ohio river called for more of "the soap that floated." In those days a floating soap was more than just a curiosity. The towns along the Ohio and Mississippi, where the first sales were made, drew their water directly from the rivers. Unfiltered, it was murky and brown (and full of typhoid) and when a bar of soap sank, it disappeared completely. To be white, pure and to float—these made an irresistible combination.

"Ivory Soap" had been named simply "White Soap" until Harley Procter, the son of one of the founders of P&G while at church one Sunday morning heard the following section read from the 45th

IVORY

Psalm: "All thy garments smell of myrrh, and aloes, and cassia, out of the ivory palaces, whereby they have made them glad . . ."

The first shipment of "Ivory Soap" went out in July, 1879. In 10 years, shipments increased more than 950 percent. The rise in volume of sales had become so rapid that between 1893 and 1894 it climbed from 24 to 40 million bars a year.

While most other things about "Ivory" changed, its whiteness, purity and ability to float excepted, the name has never been altered. Its ability to float has been questioned on a few occasions. In fact, it has just been revealed in connection with "Ivory's" 75th anniversary that seven cakes of the soap have sunk in the past 75 years.

The first recorded sinking of the famous floating soap was at Bean Point, N. Y., in 1943. News of the event failed to leak out, however, and it was not until September, 1944, when someone in Springfield, Mass., bought another sinking bar, that the mishap reached the press. It made news from coast to coast.

Now for the first time P&G revealed that since that time five other cakes of "Ivory" have gone to the bottom and stayed there. In the case of the sinkers, the tiny air bubbles responsible for the floating power of the soap were somehow missing.

"In the 75 years since 'Ivory Soap' appeared, literally billions of bars have successfully floated," said a company spokesman, "Nevertheless, it appears that freaks of manufacturing will sometimes occur."

In the research laboratories of Procter & Gamble, there was—in the words of one research director—"considerable merriment" fol-



Soap's 75th Anniversary

lowing the news of the sinking in 1944 and the considerable comment it aroused. Everybody was reminded of the famous cartoon from the *New Yorker* magazine, reproduced on page 33 of this issue. The cartoon, by Gluyas Williams on Industrial Crises appeared in 1928, and bore the title, "The day a cake of soap sank at Procter & Gamble's."

The famous "Ivory" slogan, 99 44/100% pure," which amazingly was not registered with the U. S. Patent Office until early this year, never had been registered. Neither—in 74 years—had it ever been imitated.

How that slogan came to be is described as follows.

Mr. Procter had written for "Ivory" testimonials for use in advertising from the best scientists and college professors of the day—another innovation. One reply was a letter of W. M. Habirshaw, an analytical chemist at 159 Front St., New York City. Accompanying the letter was a highly technical analysis of the soap, showing .11%, .28% and .17% of various impurities. Harley Procter totaled them,

subtracted from 100% and wrote: "The 'Ivory' is a Laundry Soap, with all the fine qualities of choice Toilet Soap, and is 99 44/100 per cent pure."

Role of Advertising

ADVERTISING played an important role in the success of "Ivory" from almost the very beginning. Using famous artists to do the illustrations, an innovation in itself, the soap was promoted through the use of full-page advertisements, which was all but unheard of. The use of jingles, beginning in the 1870's with Bret Harte's doggerel on behalf of another soap product, was widely adopted by Procter & Gamble for "Ivory." Mr. Harte's jingle began:

"On Sabbath morn, as heavenward

White Mountain tourists slowly spurred

On every rock, to their dismay,
They read the legend, always—
SAPOLIO . . ."

The use of "It Floats" as an "Ivory" slogan first appeared prom-

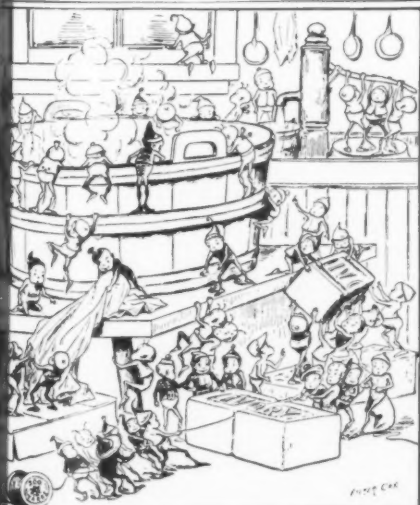
inently in *Century Magazine* of July 18, 1891. The advertisement consisted of a drawing of a little Negro boy sailing in an "Ivory" ship in the river. Beneath the drawing appeared the words "It Floats." A full page advertisement in color in *Leslie's Illustrated Weekly* of 1896 made another first for "Ivory" advertising. In those days color illustrations had to be made in Europe to learn how it was done, and after that—and long ahead of the magazines—they were able to print their own. Shortly afterwards the "Good Ship Ivory Soap" was launched by the famous John Martin, and parents were reading installments aloud to their children at bedtime.

The advent of radio gave "Ivory" a whole new medium—and the nation a new institution. With "Ivory's" program *The Gibson Family* in 1934 and *The O'Neills* in 1935 the new era of the soap opera was given considerable impetus. Later came such programs as Ralph Edwards' original *Truth or Consequences*, the Lowell Thomas news

(Turn to Page 65)

Typical "Ivory" advertisements of an earlier era featured Palmer Cox Brownies drawing at left and an early advertisement (center) carrying the "99 44/100 percent pure" slogan. A current "Ivory" baby, Miss Candice De Gruchy, sits at

right with a variety of the soap's wrapper styles. Insert is of first Ivory baby, appearing on a counter card of 1887.



When cheerful light of day has fled,
Then comes the cunning Brownie Band,
From every quarter of the land,
And takes possession of the hall,
The tub, the kitchen, pump, and all;
The clothes-line may be seen
With busy hands they work and play
The washing hanging clean
Quite beyond our greatest hope.



"THE 'IVORY' is a Laundry Soap, with all the fine qualities of a choice Toilet Soap, and is 99 44/100 per cent pure."
Ladies will find this Soap especially adapted for washing linen, infants' clothing, silk, lace, cleaning gloves and all articles of fine texture and delicate color, and for the varied uses about the house that daily arise, requiring the use of soap that is above the ordinary in quality.
For the Bath, Toilet, or Nursery it is prepared in most of the Soap sold for toilet use, being gentle and much more pleasant and effective and promoting all the desirable properties of the finest undiluted White Castile Soap. The Ivory Soap will float.
The cakes are so shaped that they may be used entire for toilet purposes or divided with a good thread, as illustrated, into two perfectly formed cakes, of convenient size for toilet use.
The price, compared to the quality and the size of the cakes, makes it the cheapest Soap for everybody for every use. Try it.
SOLD EVERYWHERE.

THE HANCOCK INSPIRA
THE BEST BOILER-FEEDER KNOWN

LOO
Superior Toilet Soap, Cakes for Bathing, Shaving, etc.
ALFORD, WARD, DAVEN
77 CHAMBERS ST., N.Y.

HOLIDAY
A. H. B. Co.
100-120 Hudson River
PECK & SN
100-120 Hudson River

T. ASPINWALL
Nos. 73 and 75 West 92d St.
TILES
BATHS, GRATES, ETC.
Sole Agents for MINTON
CARPENTERS, N.Y.

T. G. SELL
No. 214 Fulton Street
DESKS





WHAT'S N

A gift type soap chest containing guest, hand and bath size cakes of soap was announced recently by Hewitt Soap Co., Dayton, O. The two layer chest, the top layer of which slides back as the lid is raised, retails for \$2.50.



"Barz," a new, odorless urinal deodorant block for controlling odors, was announced recently by Huron Chemical, Inc., Ann Arbor, Mich. Especially designed for use in automatic and manually operated urinals, "Barz" retails for \$2.25 for a box of 12. Net weight 24 oz.



Two new private brand soap combinations announced recently by Hewitt Soap Co., Dayton, are the three cake "Savoy" unit, left, and the five cake, multi-colored assortment at right. Both are designed for sale through variety syndicate stores. The "Savoy" soap, which is also suggested for sale through supermarkets, is designed to retail for 34 cents per package. The multi-colored soap package should retail for 29 cents.

NEW?

A new emulsion-type bowl cleaner, upper left, called "Virox," was introduced in a quart glass bottle with applied color lettering recently by Betco Corp., Toledo. Back label, also in applied color, carries detailed instructions for use of the product. Bottles and closures by Owens-Illinois Glass Co.

New dispenser (top, right) for presenting aerosol formulations to its customers was announced recently by Fritzsche Brothers, Inc., New York. White enamel coated metal container has wrap-around label printed in black and chrome yellow. Label has been designed to fit large container and its smaller companion unit. Cap is of white plastic.

"Magic Foam," center, left, new improved cleaner for carpets, upholstery and draperies, is now being manufactured by Magic Foam, Corp., wholly owned subsidiary of Wiggs Hamilton Chemical Co., Cincinnati. Amber pint, quart round and half-gallon jugs with glass handle feature applied color labels. Package and label designed by Owens-Illinois Glass Co., Toledo, which supplies glass and yellow closures.

Roger & Gallet, New York, recently introduced "RG 10," center, right, a detergent designed for washing hands, face and body. A golden liquid, the product comes in plastic squeeze bottle. It contains hexachlorophene.

New "Rose Jasmine" floating soap of Jaquet, Inc., Chicago, which comes in frosted pink, retails for \$3.75 for a box of three cakes. Resembles pink marble.

"Sana-Kleen T-77," a toilet bowl cleaner which is placed in the flush tank of the toilet, was announced recently by Puro Co., St. Louis. It is claimed that through chemical action the cleaner removes dirt, stains and unpleasant odors in the toilet bowl. The item is packed 12 to the tube or 24 to the carton.





Important facts for formulators of mechanical-

Have you been looking for a surface-active agent that will enhance the rinsability of your compounds without increasing the suds level? Wyandotte's Pluronics will do just that, and at the same time give you two extra advantages — effective, permanent dedusting and no increase in moisture pickup.

When Wyandotte first announced a new series of 100% active nonionic surface-active agents — the Pluronics — we believed these products held unusual promise for a wide variety of important applications. One of them was in mechanical-dishwashing compounds.

Subsequent tests and commercial applications have now made this early promise an established fact. The successful use of Wyandotte Pluronics by formulators of mechanical-dishwashing compounds is due to a unique combination of desirable properties:

- 1 An ability to eliminate staining and streaking caused by improper rinsing.**
- 2 Exceptionally low foaming.**
- 3 Better, more permanent dedusting effect than other surface-active agents.**
- 4 No increase in the hygroscopicity of the compound.**

This combination of vital properties cannot be duplicated in any other single nonionic surfactant. The over-all balance of the Pluronics makes them the most versatile agents of their type available today. Here

are some questions and factful answers about the Pluronics in mechanical-dishwashing compounds. You may want to discuss them further with the Wyandotte representative in your area:

WHAT ARE THE PLURONICS?

The Pluronics are a unique series of nonionic surfactants, prepared by condensing ethylene oxide with a hydrophobic base formed by the condensation of propylene oxide with propylene glycol. This molecular system has the outstanding advantage of inherent flexibility. It is possible, by varying the molecular weight of either the hydrophilic or hydrophobic portion, to prepare a product to meet almost any requirement of molecular weight or hydrophilic-hydrophobic balance. Pluronics L44, L61, L62, L64 (liquid) and F68 (flake

or powder) have become standard grades. Choose the liquid, flake or powdered grade that is best for your formulation.

WHY ARE PLURONICS ESPECIALLY VALUABLE IN MECHANICAL-DISHWASHING FORMULATIONS?

Pluronics offer outstanding benefits in rinsability, low-foaming properties and dedusting. In addition, Pluronics are compatible with all commonly used builders; stable and effective over the entire range of pH; noncorrosive to metals; and relatively nontoxic, odorless and tasteless.

**HEADQUARTERS FOR ALKALIES • SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
CHLORINE • AGRICULTURAL INSECTICIDES • ANIONIC AND NONIONIC DETERGENTS • GLYCOLS**

*Report on Wyandotte Pluronics**

dishwashing compounds

WHAT ABOUT RINSABILITY?

Pluronics provide maximum effectiveness as rinsing agents, in proportions as low as 0.5% to 2%. Laboratory evaluations, field tests and established commercial usage have shown the Pluronics to be superior in the promotion of free-rinsing. Staining and streaking due to improper rinsing have been decreased by as much as 90% by the inclusion of very small amounts of the Pluronics.

WHAT ABOUT LOW-FOAMING PROPERTIES?

Pluronics provide exceptionally low-foaming properties, with resultant outstanding washing effectiveness. They maintain their low-foaming characteristics under almost all conditions of use. Pluronics L61 and L62 are the lowest foaming surface-active agents known today.

WHAT ABOUT PLURONIC'S DEDUSTING EFFECT?

Their dedusting effect is much more permanent than that of other surface-active agents . . . yet dishwashing products incorporating the Pluronics remain free-flowing. Compounders report other dedusting agents lose their effectiveness after two to six months, whereas the use of half as much Pluronics gives permanent dedusting. This superiority is believed to be due to the much higher molecular weight of the Pluronics.

HOW WOULD PLURONICS BE USED IN THE FORMULATION OF ANY AUTOMATIC DISHWASHING DETERGENT?

The three basic ingredients in an automatic dishwashing formulation are: a basic alkali, a water softener, and a rinsing agent. In a typical formulation, soda ash would be used as the basic alkali, sodium tripolyphosphate as the water softener, and the Pluronic L62 as the rinsing agent. Sodium metasilicate might be added to inhibit corrosion.

CALCIUM CARBONATE • CALCIUM CHLORIDE
OTHER ORGANIC AND INORGANIC CHEMICALS

WHAT HAVE I TO GAIN FROM INVESTIGATING THE PLURONICS?

Incorporating the Pluronics, with their unique properties, in a dishwashing compound, could well be the key to a marked product advantage that would give you the jump on competition.

WHAT ARE SOME OF PLURONICS' OTHER APPLICATIONS?

Application of Pluronics in water conditioning, boiler water compounds, metal cleaning and cutting, and home-laundry detergents have also become established. More exciting, beneficial uses of the Pluronics can safely be expected to emerge from development work now progressing in soaps, cosmetics and detergents.

HOW CAN I FIND OUT MORE ABOUT THE PLURONICS?

Fill out the coupon below, and tell us your needs. We will be happy to supply you with samples of the Pluronics, a data sheet summarizing their physical and surface-active properties, and other technical and price information. Mail the coupon today! Wyandotte Chemicals Corp., Wyandotte, Michigan. Offices in principal cities.

*REG. U.S. PAT. OFF.



Wyandotte
REG. U.S. PAT. OFF.
CHEMICALS

Wyandotte Chemicals Corporation
Department SCS-7, Wyandotte, Michigan

Please send:

- ☐ Data on the use of Pluronics in mechanical dishwashing
☐ Samples of the Pluronics ☐ Have representative call

Name _____

Firm _____

Address _____

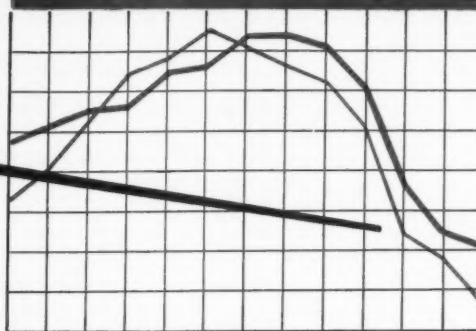
City _____ Zone _____ State _____

HE CUTS YOUR COSTS...

when he's put
to work in your shampoo



RAW MATERIAL COSTS



The ULTRAWETS wet, penetrate, clean, emulsify.

Have you met the ULTRAWETS, the alkyl aryl sulfonates that have saving ways with good shampoos?

Here's why you'll want to know them better . . .

ULTRAWETS in your shampoo formulation may help you to improve your present product. On top of that, these superior alkyl aryl sulfonates are far less costly than many other types of detergents and will lower your costs.

Add the inevitable consumer acceptance of these new shampoos, and you have a combination of advantages well worth going after. Let us help you. Our sales engineers will be glad to work with you to develop the ULTRAWET-base shampoo formulation to meet your performance requirements. Just send the coupon or write one of the offices listed.

THE ATLANTIC REFINING COMPANY

Dept. E-7, Chemical Products Sales
260 South Broad Street, Philadelphia 1, Pa.

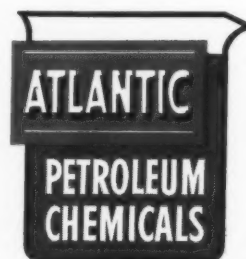
Please send information on use of ULTRAWET in shampoo.

Name _____

Position _____

Company _____

Address _____



Philadelphia, Providence, Charlotte, Chicago

In the West: L. H. Butcher Co.

In Canada: Naugatuck Chemicals Division of
Dominion Rubber Company, Ltd.

In Europe: Atlantic Chemicals SAB, Antwerp, Belgium

SHAMPOOS

have top billing in hair products on the market today. Soap and soapless ones vie with each other and their promotion has so speeded their growth that every manufacturer of cosmetics has leaped into the shampoo field. What will dictate the consumer's choice among all of them? PERFUME, it has been proved, is one of the major factors in determining a shampoo's sales appeal. Selection of a compatible fragrance with all the qualifications necessary for soap or soapless shampoos, cream shampoos, lotion shampoos, or clear liquid shampoos, is ROURE-DUPONT's specialty. We have all of the finest ingredients, the perfumers to create the fragrances, the chemists to test them in your product. Send us a sample of your unperfumed product and we will perfume it for you, or let us submit to you a shampoo of our creation suitably perfumed with a fragrance all its own.

ESSENTIAL OILS
AROMATIC CHEMICALS
PERFUME BASES

Roure-Dupont inc.

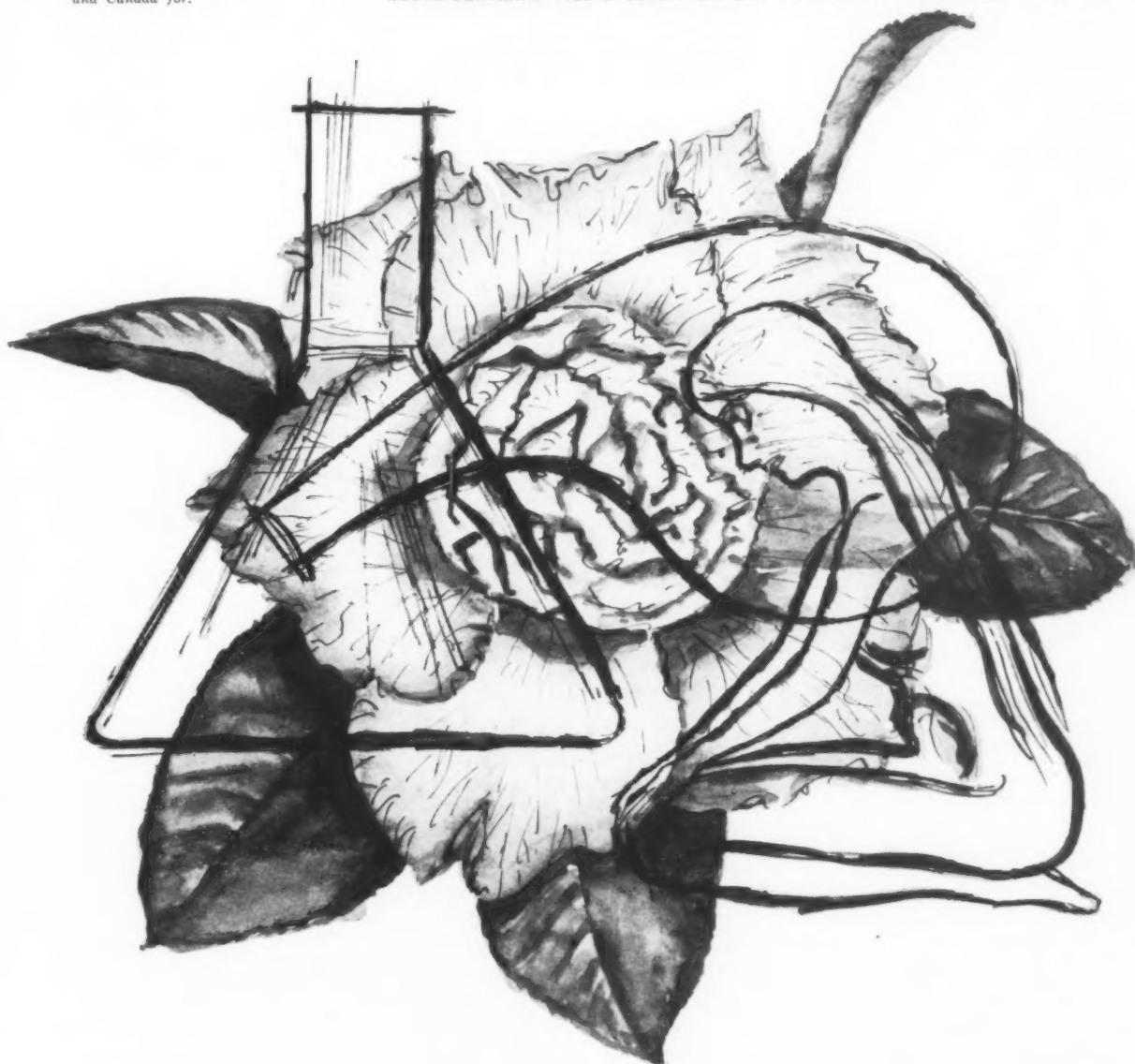
General Offices: 366 Madison Avenue, New York 17, N. Y.

Chicago Branch: 510 North Dearborn Street

Los Angeles Branch: 5517 Sunset Boulevard, Hollywood

Sole Agents in United States
and Canada for:

ROURE-BERTRAND FILS et JUSTIN DUPONT Grasse (A.M.) France, Argenteuil (S.&O.) France

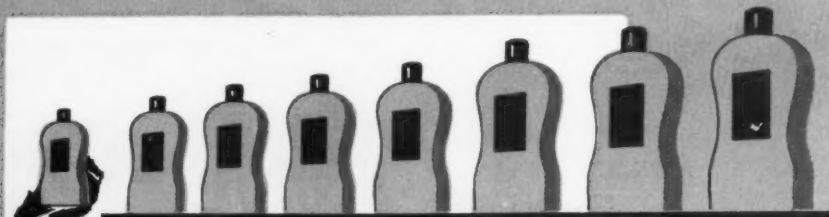


CASE HISTORY

Another product improved by an Emery Fatty Acid



**HOW EMERSOL® OLEIC ACID
INCREASED SHELF LIFE,
REDUCED PERFUME COSTS
OF PREMIUM SHAMPOO!**



ARY

FRI		SAT	
5	6		
12	13		
19	20		
26	27		
28	29	30	31
10	11	12	13
18	19	20	21
25	26	27	28
28	29	30	
25	26	27	28

THE PROBLEM of increased shelf-life for this manufacturer's premium shampoo was quickly solved when Emersol 233 LL Elaine was substituted for an ordinary double-distilled oleic acid. After a prolonged aging test, the shampoo containing Emersol 233 had the same light color, pleasant odor, viscosity, clarity, and sudsing characteristics as the day it was made. Furthermore, perfume costs were reduced since there were no longer rancid odors that required masking.

To You Who Don't Make Shampoo—

Even though your product may not be related to shampoos or soaps, the outstanding *color stability*,

oxidation stability and *resistance to rancidity* of Emersol 233 can make your product better, stay better longer.

These advantageous stability characteristics are also inherent in Emersols 220 and 221 White Elaines, however, to a lesser degree, but, still far superior to competitive double-distilled oleic acids.

The greater consumer appeal that these Emersol multiple-distilled oleic acids impart to your product will make them readily accepted . . . easier to sell. And since they cost no more than competitive grades, it will *always* pay you to buy Emersol multiple-distilled oleic acids.



**Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers**

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio

New York • Philadelphia • Lowell, Mass. • Chicago • San Francisco
Cleveland • Ecclestone Chemical Co., Detroit

Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles

Export: 5035 RCA Bldg., New York 20, New York

News

Mumford Lever Vice-Pres.

The election of Milton C. Mumford as vice-president of Lever Brothers Co., New York, was announced early this month by Jervis



Milton C. Mumford

J. Babb, president. Mr. Mumford until recently was vice-president of Marshall Field and Co., Chicago, and general manager of Fieldcrest Mills, the company's textile manufacturing division with headquarters in New York.

Following his graduation from the University of Illinois in 1935, he joined the Marshall Field organization. After a series of advancements covering positions in finance, labor relations, marketing and manufacturing, he was elected vice-president in 1948. While still retaining his position as vice-president of Marshall Field and Co., Mr. Mumford became general manager of Fieldcrest Mills in 1950. He was responsible for the manufacturing, distribution and sales operations of the division until it was sold late in 1953. He acted for a short time as president of the newly formed Fieldcrest Mills, Inc.

John W. Stanley Dies

John W. Stanley, 83, vice-president of John T. Stanley Soap Co., New York, died at his home in New York City, June 13. He

had been ill for some time. Mr. Stanley was a son of the founder of the 89 year old family owned corporation. He had been with the firm for about 66 years. Mr. Stanley started his career as a salesman and when the firm was incorporated in 1914 he became a vice-president.

Survivors include his brother Alfred T. Stanley, president of the company; a son, John T. Stanley, secretary, and another son, Alfred T. Stanley, manager of the company's rendering plant in Se-caucus, N. J. A sister, Mrs. Charles H. Parmly of New York, and a daughter, Mrs. Montgomery Crane of Great Barrington, Mass., also survive.

Mr. Stanley had devoted himself to numerous charitable enterprises, among them were the Catholic Charities of the Archdiocese of New York; the Salvation Army, Boys Town, near Omaha, Nebr.

— ★ —

Finetex Builds Plant

Construction of a new two story plant in East Paterson, N. J., has been started by Finetex, Inc., Pompton Plains, N. J., it was announced recently. The new building will house facilities for large scale production of synthetic detergents and a modern laboratory for research and product development. The plant is expected to be in operation Oct. 1, 1954.

— ★ —

"Trend" Moves East

"Trend," the light duty detergent made by Purex Corp., South Gate, Calif., was introduced to the Eastern market recently. The introduction was based on a one cent sale which, according to Robert F. Sharp, vice-president and general sales manager, has been highly successful in building up other markets.

Pensak Joins Colgate

Philip Pensak has joined the department of research and development of the Colgate-Palmolive Co., Jersey City, N. J., as a chemist in



Philip Pensak

the analytical laboratory, it was announced last month. He was previously employed by the Armed Services Medical Procurement Agency, Brooklyn, N. Y. A 1947 graduate of Queens College, New York, he lives in Forest Hills, N. Y.

— ★ —

India Eases Soap Tax

Exemption from excise duty of the first 125 tons of washing soap and 225 tons of toilet soap cleared from any taxable factory after April 1 of each year was announced recently by the Indian finance minister. The concession became effective April 1, 1954. Most of the medium sized plants in India do not produce more than 150 tons of soap a year and will thus remain unaffected by the excise levy.

— ★ —

Wash Station on TV

The "Waterless Wash Station" developed by Sugar Beet Products Co., Saginaw, Mich., has been filmed in action for inclusion on the Saturday afternoon TV program entitled "Industry on Parade." The program is sponsored by the National Association of Manufacturers



Try this test on a strip of aluminum. In a carbonate solution, notice the bubbles that form and after a few drops of PQ Silicate are added, how quickly this action stops. There is no further attack on aluminum.

A good detergent builder also must be an effective inhibitor. You get both from the use of PQ Silicates. They protect aluminum, copper, brass, zinc and enamel and glazes from attack by synthetic detergents, phosphates and other alkalies.

When may we discuss what good company PQ Silicates are for your household or industrial cleansers, soaps, detergents?

P.Q.[®] Silicates of Soda
METSO[®] DETERGENTS



Philadelphia Quartz Co.
1152 Public Ledger Bldg., Philadelphia 6, Pa.

and tells how American industry develops an idea into a marketable product. The wash station uses "SBS-11" heavy duty skin cleanser, a product of the firm's chemical by-products division.

BIMS Golf July 20

The BIMS of New York will hold their second outing of the season at Winged Foot Country Club, Mamaroneck, N. Y., Tuesday, July 20. The June affair was held on the 24th at the Knoll Club in Boonton, N. J. On Aug. 17, the BIMS will hold their golf outing at Wheatley Hills Country Club, E. Williston, N. Y.

N. Y. Regional Meeting

A two-day regional meeting of east coast members of the National Sanitary Supply Association will be held Wednesday and Thursday, Oct. 27 and 28, at the Hotel Statler, New York. In making the announcement of the meeting place, Burton L. Feinson of American Dispenser Co., New York, and eastern regional vice-president of the National Sanitary Supply Association, pointed out that the dates have been moved back one day from those previously announced.

Although program details have not been complete as yet, the general outline of the meeting will follow that of previous years. The first day of the meeting, Wednesday, Oct. 27, will open with registration, beginning at 8:00 a.m. A morning discussion session, which will feature reports of N.S.S.A. officers and directors, will also include an address of welcome by a high official of the City of New York. Following luncheon there will be talks on selling, sanitation problems in a large organization and a panel on mutual problems of jobbers and manufacturers. The banquet and reception for the fifth annual regional meeting will be held Wednesday evening, Oct. 27. The following day there will be a full morning discussion session, group luncheon and an afternoon meeting, which will end at approximately 4 p.m.

F. T. C. to Investigate Soap Couponing

C OUPONING practices in the soap industry are to be subjected to a full investigation by the Federal Trade Commission, it was announced last month by U. S. Senator Edward J. Thye, Republican of Minnesota and Senator James H. Duff, Republican of Pennsylvania. Senator Thye is chairman of the Senate Small Business Committee and Senator Duff is chairman of the Subcommittee on Retailing, Distribution and Fair Trade Practices.

As a result of the Committee's call for action in regard to couponing practices in the soap and flour fields "applications for complaints" have been docketed against several major soap and flour companies. This was revealed by Edward F. Howrey, Chairman of the F.T.C.

A report on the course being pursued by the Federal Trade Commission in regard to couponing practices was requested of Mr. Howrey in Sept. 1953, by the Senate's Small Business Committee. The request, it was said, was prompted by numerous complaints. At that time Senator Duff stated that "preliminary study by my subcommittee indicated that coupon campaigns were having adverse effects upon small business competition. I am particularly concerned over the so-called cross-couponing practice whereby a big company offers with the purchase of its product a coupon redeemable only upon the purchase of a product manufactured by another large, though unaffiliated company. These tie-in sales are alarming in that they permit two large concerns to combine their resources in a common effort against independent competition," Senator Duff declared.

The primary purpose of the investigation will be to determine whether the couponing practices of these companies violate Section 5 of the Federal Trade Commission Act or Section 2 of the Clayton

Act, according to the resolution adopted by the FTC. Significance is attached to the fact that the FTC has utilized "compulsory process" in the investigation. The procedure was necessitated, according to Mr. Howrey, because "some difficulty was experienced in obtaining voluntarily all the information required for a complete investigation of some of the companies involved."

Boston BIMS Golf

BIMS of Boston held their first golf outing of the season on June 24 at Weston (Mass.) Golf Club and the largest crowd in several years showed up for golf and a steak dinner.

Golf prizes were won by:

William Starkey, Chas. Pfizer & Co.; C. P. Seaverns, Howe & French, Inc.; James Kelly, Pacquins; David O'Connell, Howe & French, Inc.; F. J. Hailer, Jr., Whittaker, Clark & Daniels, Inc.; Al Weston B. B. Chemical Co. and Hart Harris, Jr., S. B. Penick & Co.

Door prizes and special prizes were awarded to:

Ernest Ingham, Ingham of Boston; Lyle Stymiest, Rexall Drug Co.; Harold Ingham, Ingham of Boston; Charles Houghton, Safety Fumigant Co.; Warren Kell, Ungerer & Co.; Robert H. Jackson, New England Confectionery Co.; F. J. Hailer, Jr., Whittaker, Clark & Daniels, Inc., and John Ahern, U. S. Industrial Chemicals, Inc.

An outdoor barbecue set was won in a raffle by T. J. Conlon of Woonsocket Color & Chemical Co.

E. E. Aldrich of Rexall Drug Co., Boston, treasurer of the BIMS of Boston for many years has resigned that post, it was announced by the executive committee, and has been succeeded by C. T. Hoye, also of Rexall.

Joins Atlantic Refining

Atlantic Refining Co., Philadelphia, recently announced the appointment of Donald R. Longman as manager of market research. He has most recently served as executive director of Dunn & Bradstreet's marketing research division in New York.

Orvus AB Granules . .



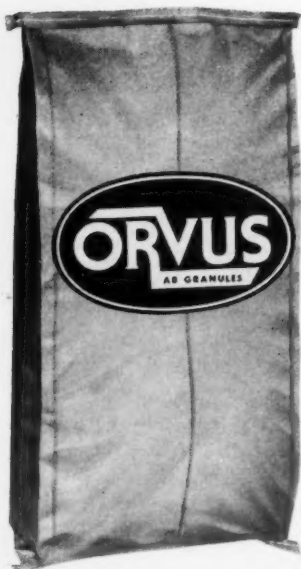
Smooth as Silk in your mixing operations

If you're turning out a product which incorporates a synthetic detergent, you can take the guesswork out of your mixing operations by standardizing on Orvus AB Granules.

It's easy to get uniform mixtures with Orvus AB because of this product's unusual granule characteristics. Unlike many "blown" detergents, Orvus AB Granules resemble miniature sponges rather than hollow spheres. There's little danger of granule breakdown in mixing . . . little danger of stratification, sifting or settling out. Orvus AB blends readily and intimately with other ingredients.

Orvus AB has exceptional detergent, sudsing, wetting, dispersing and emulsifying properties. It is non-irritating to the skin—a feature your employees and your customers will appreciate.

There's a place for Orvus AB in your converting picture. For information regarding specific applications and formulas for Orvus AB Granules, mail a postcard to—



Procter & Gamble

Bulk Soap Sales Department
P. O. Box 599, Cincinnati 1, Ohio



AMERICA'S LARGEST MANUFACTURERS OF SOAPS AND SYNTHETIC DETERGENTS.

New Ninol Operation

Ninol Laboratories, Inc., Chicago, recently announced completion of the first phase of its current building operations with full scale production of salt free sulfonates now under way at its new south side plant.

Incorporating the latest developments in process design, this plant is one of the first in the country to produce specialty sulfonates from liquid sulfur trioxide — a process on which the firm has carried out extensive pioneering work over the past few years. Use of sulfur trioxide in place of the conventional oleum has the advantage of producing salt free sulfonates in a single inexpensive step — eliminating the need for costly desalting procedures.

Future plans include erection of additional manufacturing facilities and a modern laboratory and office building on the 10 acre site.

Founded in 1936, Ninol Laboratories was the original producer of the alkylolamide or "amine condensate" type of detergent, on which it holds the basic patents. Since the war, the company has undertaken a diversification program, and is important in specialty sulfonates, nonionics, agricultural emulsifiers and a number of fine organic chemicals.

Werner Reelected

William G. Werner, public relations director of Procter & Gamble Co., Cincinnati, was reelected a director of the Brand Names Foundation, it was announced recently. He will serve a three year term on the board.

New Nacconol Liquid

A new liquid form of "Nacconol" synthetic detergent, being marketed under the name "Nacconol SL," is now being produced by National Aniline Division, Allied Chemical & Dye Corp., New York, it was announced late last month. "Nacconol SL" is exceptionally light in color, has a pleasant characteristic odor, a very low haze point, no precipitation at temperatures down to freezing and a low

salt content, according to the maker. Users, formulators and repackers of synthetic detergents may obtain a sample of the new liquid detergent by writing the company at 40 Rector St., New York 6, N. Y.

Rosenthal-Bercow Moves

Rosenthal-Bercow Co., Inc., recently announced the removal of their offices from 25 East 26th St., New York 10, to new quarters located at 23 East 26th St., New York 10.

Cassidy Receives Degree

J. Clarke Cassidy, president of Niagara Alkali Co., New York, received an honorary Doctor of Science degree from Niagara University during the 97th commencement exercises on June 6. Mr. Cassidy, who makes his headquarters at the company's plant in Niagara Falls, N. Y., was cited by the university for his "love for humanity and keen skill in industrial science." Mr. Cassidy's charitable activities include the board chairmanship of Mount St. Mary's Hospital. He also served as chairman of the hospital's campaign for \$300,000. He is a former member of the board of education of Niagara Falls and is a past president of that city's Chamber of Commerce. In addition Mr. Cassidy is president of Niagara Falls' Community Chest and has been chairman of the American Red Cross Blood Program Committee since its inception.

J. Clarke Cassidy



Surfactant Data

A series of five bulletins covering various applications of its "Petro AA," 98 percent active anionic surfactant powder were released recently by Petrochemicals Co., Long Beach, Calif. Properties of the "Petro AA" surfactant, which comes as a light colored powder are covered in one bulletin. According to this bulletin the surfactant for bowl cleaners, etc., is soluble and active in strong solutions of all common acids; it is compatible with alkalis or acids and salts in powders, dry mixes and is low foaming.

The application bulletins deal with the use of "Petro AA" in textile processing, metal processing and finishing, in low suds type detergents for automatic washing machines and in slurry converting operations as an additive and viscosity reducer.

Convertors or other interested users may obtain copies of the bulletins by writing to Petrochemicals Co., 1825 E. Spring St., Long Beach 6, Calif., or from the eastern sales office in the Graybar Building, New York 17, N. Y.

Feit Joins Knapp

A. J. Feit has been appointed sales representative for the Midwest territory of the Knapp Fine Chemicals Products, Inc., Lodi, N. J., it was announced recently by I. R. Hollenberg, president.

Mr. Feit, who makes his office at 1713 S. Halsted St., Chicago 8, was for many years employed in the Chicago area by the Fine Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del., before joining Knapp.

Bersworth Changes Name

Bersworth Chemical Co., Framingham, Mass., producers of sequestering agents, recently announced the company name had been changed to Versenes, Inc. The "Versene" name has been used as a registered trade mark for the firm's line of sequestrants and chelating agents.

Whatever type you make . . .

there's a Du Pont detergent

specially designed
for your shampoo



For clear liquid shampoos . . .

Duponol[®] **EP** is specially designed for greater efficiency, lower cloud point, and color-stable to heat, light, and aging . . . to give you easier and more economical formulation of your clear liquid shampoos.

For liquid cream shampoos . . .

Duponol[®] **WAQ** is specially designed for easily controlled cleansing power, excellent foaming, and color-stable to heat, light, and aging . . . to give you balanced performance in your liquid cream shampoos.

For solid cream shampoos . . .

Duponol[®] **WA** Paste is specially designed for thorough cleansing power; excellent foaming; and color-stable to heat, light, and aging . . . to give you easier, more economical formulation of your solid cream shampoos.

Du Pont can help you solve your shampoo formulation problems. In fact, Du Pont's research staff probably has your answer already. For prompt assistance and information—including dozens of tested and proven formulas—write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

*Trade-Mark for Du Pont's Surface Active Agents

DU PONT *Duponol*
DETERGENT
REG. U. S. PAT. OFF.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Detergent Congress Aug. 30

Names of some of the outstanding American, British and European detergent scientists who will attend the first World Congress on Detergency and Surface Active Agents, to be held at the Sorbonne in Paris, Aug. 30-Sept. 3, were released late last month by the French Embassy in New York.

Heading the United States delegates will be Dr. Thomas Vaughn, vice-president in charge of research for Colgate-Palmolive Co., Jersey City, N. J. and V. Blinoff, president of American Alcolac Corp., Baltimore.

The congress, which is sponsored by the association of synthetic detergent manufacturers, *Chambre Syndicale Nationale des Transformateurs de Matieres Grasses et Fabricants de Produits Auxiliaires, TRAMGRAS*, will name a permanent research committee to investigate and report on the standardization of international methods of analysis and testing of the different powers of detergents and surface active agents. An international nomenclature for surface active agents and detergents will also be investigated. There will be exhibits as well as discussion sessions during the congress.

Seventeen sections or sessions have been planned for the congress broken down in the following divisions: scientific, technical, application and economics. The application division will hear papers on household cleaning products and will feature a paper by Dr. Segesser, director of the *Savonnerie Hochdorf*, Switzerland. Laundering, cleaning and scouring will be covered in papers in Section 7 of the application division.

SAACI Golf Dates

The next golf outing of the Salesmen's Association of the American Chemical Industry will be held Tuesday, Aug. 10 at Tamarack Country Club, Greenwich, Conn. The July 13 outing was held at Baltusrol Golf Club, Springfield, N. J., scene of this year's National

Open. The final outing of the season will be held Tuesday, Sept. 14 at Hackensack Country Club, Oradell, N. J.

First Hooker Plant Visit

Hooker Electrochemical Co., Niagara Falls, N. Y., played host at Montague, Mich., June 18 to a group of approximately 225 first visitors to its newly opened \$12 million caustic soda and chlorine plant. Most of the visitors were representatives of chemical consuming industries.

Nearly 125 of the group, from various parts of the country, had assembled in Chicago to take a special train to Montague. Prior to touring the Hooker plant, they visited the B. C. Cobb station of Consumers Power Co. at Muskegon, Mich., which furnishes the power for Hooker's new plant 14 miles away. All guests assembled for a luncheon at the Hooker guest house.

Leaves Soap Firm

J. Paul McKinney recently left White King Soap Co., Los Angeles, and has been named vice president of Raymond R. Morgan Co., an advertising agency in Hollywood. Mr. McKinney had been a sales executive with White King for many years.

McGlynns to Europe

George H. McGlynn, vice-president and treasurer of Magnus, Mabee & Reynard, Inc., New York, essential oil firm, and Mrs. McGlynn sailed for Europe on the *S.S. America*, June 26. They are visiting England, Ireland, France, Belgium, Switzerland and Holland during their six weeks trip. A bon-voyage dinner party was held in their honor by members of the MM&R organization at Statler Hotel, New York.

Mr. McGlynn is visiting leading producers of essential oils and a number of the company's agents.

Jervis J. Babb, (right) president of Lever Brothers Co., New York, unveils a stainless steel plaque dedicating a new Lever Brothers detergent manufacturing plant and warehouse distribution center in the St. Louis suburb of Pagedale, Mo. during Family Day and Open House, recently. An overflow crowd of 5,000 visitors attended the opening ceremonies at the plant which produces "Surf" and "Breeze." The plant, which takes the place of the century-old quarters in downtown St. Louis, from which Lever moved to its present 27 acre site, serves as a distribution center for Lever products in a 15 state area.

Assisting Mr. Babb were (left to right), George W. Reichardt, chairman of the Family Day Employee Committee and president of Local 344, International Chemical Workers Union, A.F.L.; W. H. Burkhart, Lever Brothers executive vice-president, and Maynard B. Bemis, plant manager.

On hand to greet visitors were plant officials and employee representatives as well as members of Lever's board of directors.



GARDENIA

SNEET PEA

Carnation

HYACINTH

Lilac

Lavender

Lily of the Valley

rose

violet

Jasmin

Natural floral odours faithfully adapted for soap

POLAK & SCHWARZ

POLAK & SCHWARZ

PERFUMERY SPECIALTIES — ESSENTIAL OILS — AROMATIC CHEMICALS

Polak & Schwarz Inc., 667 Washington Street, New York 14 (N.Y.)

Seeks Coconut Tax Repeal

A bill designed to repeal the three cents per pound processing tax on coconut oil is being introduced in Congress by U. S. Representative John D. Dingell, Democrat of Michigan, it was learned late last month. Rep. Dingell, a member of the Committee on Ways and Means, stated that this action is urgent because of mounting unemployment at this time in the crushing industry.

Only seven copra crushing plants in the U. S. are still in operation, according to Rep. Dingell, and they are operating on a reduced basis, he said. Of three independent crushing plants on the Atlantic Seaboard, two are closed and one not only has been closed, but dismantled. On the West Coast, three are closed, one has been dismantled, and one partially dismantled and operating the remainder of its facilities at a reduced capacity.

In addition to requiring consumers to pay the additional amount over the world price, the effect of the tax on the Philippine economy and the small amount of revenue realized from the tax were cited as additional reasons why the tax should be repealed in the opinion of Rep. Dingell.

Honor Mrs. Snell

The election of Dr. Cornelia Tyler Snell as president of the Women's University Club of New York, was announced last month. Mrs. Snell was treasurer of the club last year. She is director of technical library services at Foster D. Snell, Inc., New York consulting chemists and engineers. Her husband, Dr. Foster Dee Snell, is president and chairman of that corporation.

Mrs. Snell won her doctorate in chemistry at Columbia University and has been connected with the Snell corporation since 1944. A specialist on detergents, cleaning methods and allied subjects, she has written a number of articles on this field for *Soap and Chemical Specialties*. She is a fellow of the Amer-

ican Association for the Advancement of Science and a member of the American Association of University Women.

Minahan to Wyandotte

James G. Minahan has been recently appointed resident salesman for Michigan Alkali Division, Wyandotte Chemicals Corp., Wyandotte, Mich., effective July 1. Mr. Minahan operates out of the firm's eastern district office in New York and makes his headquarters in Philadelphia. His territory includes metropolitan Philadelphia and eastern Pennsylvania.

A graduate of the University of Michigan, Mr. Minahan was formerly in charge of sales for the Detroit office of the Baker and Adamson products of General Chemical Division, Allied Chemical and Dye Corp., New York.

Swift Product Folders

Three folders on its lines of soaps, industrial oils and fatty acids and industrial adhesives were announced recently by Swift & Co., Chicago. Industrial soaps, toilet soaps, liquid soaps, synthetic detergents and glycerine and their applications are covered in the folder on soaps which opens out into an 8½ x 11 inch sheet.

Its line of fatty acids, tallow and stearine, lard oil, sperm oils, hydrogenated fats and glycerides and mono-, di- and triglycerides of fatty acids are reviewed in the folder on industrial oils and fatty acids.

Edgar Attapulugus Merge

The merger of Edgar Brothers Co. and Attapulugus Minerals & Chemicals Corp. became effective June 23. The name of the new company is Minerals & Chemicals Corp. of America. All correspondence which formerly would have been addressed to Edgar Brothers Co. should now be addressed to Minerals & Chemicals Corp. of America, Edgar Division, Metuchen, N. J.

Ed Maguire Dinner

A reception and dinner to mark the retirement of Edward J. Maguire as New York district sales manager of the Grasselli Chemicals Department of E. I. du Pont de Nemours & Co., Wilmington, Del., was held at the Hotel Commodore, New York, July 15. Mr. Maguire had been with du Pont for 44 years until his retirement on June 30.

The committee in charge of the dinner includes B. M. Spencer, B. M. Spencer & Co., New York, Chairman; William Atkinson, Chas. Pfizer & Co., Brooklyn; William Barry, Mallinckrodt Chemical Works, New York; Edward Collins, Chilean Nitrate Sales Corp., New York; Frank Fanning, Frank G. Fanning Co., Newark, N. J.; Tom Gowdy, New York chemical dealer; Charles Huisking, Chas. L. Huisking & Co., New York; Joseph Huisking, Fritzsche Brothers, Inc., New York; James Kerrigan, Merck & Co., Rahway, N. J.; John J. Toohy and Stephen F. Urban, E. R. Squibb & Sons, Brooklyn; Joseph Wafer, West Virginia Pulp & Paper Co., New York City, Robert Williams, Givaudan-Delawanna, New York, and Capt. C. Christian, Childs Pulp Color Co., Brooklyn.

Newport Names Two V.P.'s

Election of Ernest E. Holdman as vice president in charge of export sales and of Richard J. Spitz as vice president in charge of domestic sales was announced recently by Newport Industries, Inc., New York. Mr. Holdman has been with Newport for the past 40 years, Mr. Spitz joined the firm in 1925.

Dow Cincinnati Office

The opening of a new field office in Cincinnati to serve customers in southern Ohio, southeastern Indiana and sections of Kentucky and West Virginia was announced recently by Dow Chemical Co., Midland, Mich. The new office, located at 2330 Victory Parkway, is under the direction of Fielding H. Yost, Jr., manager of the Cleveland office.

Whatever you make
to be used in water

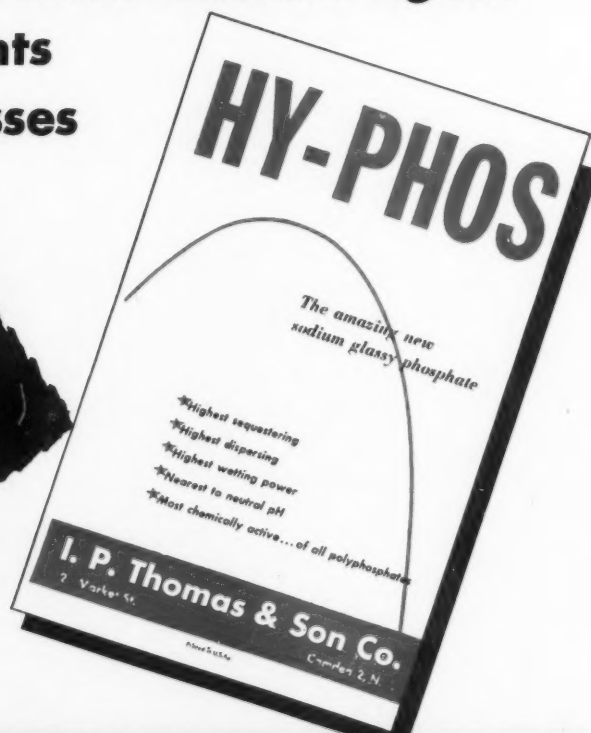


HY-PHOS* makes it work better



HY-PHOS* is the most efficient agent
for water treatments
in industrial processes

Write for sample
and formula book



*U.S. Patent
No. 2,574,047

*Trade Mark
Registered.

I. P. Thomas & Son Co.

721 Market St.

Camden 2, N. J.

Bezard Visits France

Louis Bezard, president of De Laire, Inc., New York, returned to the United States by air late in June following a six weeks visit in France. During the combination business and vacation trip, Mr. Bezard visited De Laire factories, where he discussed future plans with company officers.

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New Rhodia Section

The establishment of an engineering service section within the Industrial Alamask Reodorant Division, which it recently acquired from E. I. du Pont de Nemours & Co., Wilmington, Del., was announced last month by Rhodia, Inc., New York. The service is making available to industry trained specialists in air and stream odor pollution problems. The Alamask division produces a line of odor abatement and reodorant products for use in manufacturing operations.

Chief of the engineering service section is H. C. Nichols, a chemical engineer with experience in pollution control. Dr. Stanley A. Dunn, physical chemist, is research associate. He comes to Rhodia from du Pont's Jackson Laboratory. David Bowlus is serving as field technical sales representative. He was formerly with du Pont's New Brunswick Works.

Edward A. Bush is handling sales management; Stephen Novak, formerly with the New York office of du Pont's Dye and Chemical Division, has been named office manager for Rhodia's industrial and aromatics section, and Louis Appell is in charge of the laboratory.

The Industrial Alamask Reodorant Division and its engineering service section have been established under the guidance of du Pont's B. K. Tremaine, acting technical director of Rhodia. Other du Pont representatives assisting in Rhodia's Alamask program are N. W. Kent, acting sales manager, petroleum industry, and Thomas Linster, acting manager of the Paterson (N. J.) Works, who is supervising all operations.

"Squeeze 'N Wash" kitchen helper, bristled with tough "Ty-nex" nylon monofilament, of E. I. du Pont de Nemours and Co., Wilmington, Del., holds its own supply of soap or detergent solution to ease household tasks. (Distributed by Anro Products Company, Inc., Aurora, Illinois; manufactured by Anchor Brush Company, Aurora, Illinois)



MCA Names Emmerich

Fred J. Emmerich, president of Allied Chemical & Dye Corp., New York, was elected last month as chairman of the board of directors of the Manufacturing Chemists Association at the group's 82nd annual meeting in White Sulphur Springs, which was held jointly with that of the Synthetic Organic Chemical Manufacturers Assn.

Mr. Emmerich succeeds Charles S. Munson, chairman of the board of Air Reduction Co., New York, who was elected to the newly created post of chairman of the executive committee. William C. Foster, full time president and a director, was reelected.

Howard S. Bunn and William H. Ward were elected vice presidents. Mr. Bunn is a vice president of Union Carbide and Carbon Corp., New York. Mr. Ward is a vice president of E. I. du Pont de Nemours & Co., Wilmington, Del. M. F. Crass, Jr., full-time secretary-treasurer, also was reelected.

Directors elected for the term expiring May 31, 1957, are: Leland I. Doan, president, Dow Chemical Co., Midland, Mich.; John Fennebresque, vice president, Celanese Corp. of America, New York; Joseph Fistere, president, Mallinckrodt Chemical Works, Inc., St. Louis; A. E. Foster, Hercules Powder Co., Wilmington, Del.; John L. Gillis, vice president, Monsanto

Chemical Co., St. Louis; R. K. Gottshall, president, Atlas Powder Co., Wilmington, Del.; R. C. McCurdy, president, Shell Chemical Corp., New York; and Mr. Ward of du Pont and Mr. Foster of MCA. Directors elected for the term expiring May 31, 1956, are: V. G. Bartram, president, Shawinigan Chemicals, Ltd., and J. Clarke Cassidy, president, Niagara Alkali Co., Niagara Falls, N. Y. Charles E. Wilson, chairman of the board, Grace Chemical Co., New York was elected a director for a term expiring May 31, 1955.

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F. M. Erickson Dies

The death was announced recently of Francis M. Erickson, 54, who retired last year as Denver district manager of Colgate-Palmolive Co., Jersey City, N. J. Born in Chicago, Mr. Erickson came to Denver in 1916.

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Esposito GDC Controller

Frank L. Esposito has been named controller of General Dye-stuff Corp. and the dyestuff and chemical division of General Aniline & Film Corp., New York, it was announced recently by John C. Franklin, vice president, operations, to whom Mr. Esposito now reports. Controller at the firm's Linden, N. J., plant since 1950. Mr. Esposito succeeds Arthur J. Young, who was recently elected controller of General Aniline & Film.

For production on an even level

Uniform production depends largely upon uniform ingredients. The uniformity of Nialk chemicals is recognized throughout the chemical-using industries.

a typical example...

NIALK CAUSTIC SODA: Steady production and good results in soapmaking are achieved only when the uniformity of all ingredients is assured. Many leading makers of soaps and detergents specify NIALK Caustic Soda, knowing that its uniform high quality contributes to smooth production.

This uniformity in all NIALK chemicals is an important factor in keeping production on an even level in many fields.

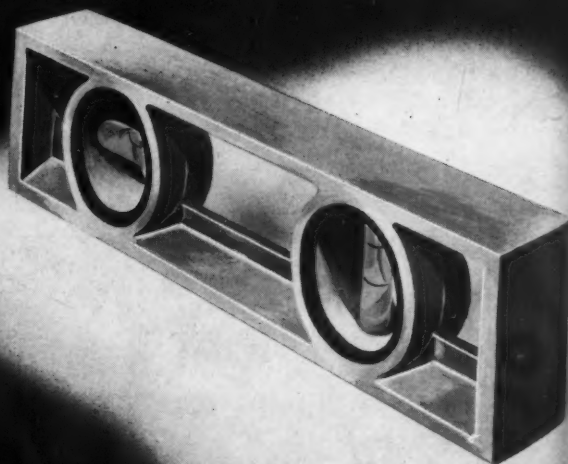
NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, New York

Nialk®

LIQUID CHLORINE
CAUSTIC POTASH
CARBONATE OF POTASH
PARADICHLOROBENZENE
CAUSTIC SODA
TRICHLOROethylene

NIAGATHAL® (TETRACHLORO PHTHALIC ANHYDRIDE)



Ivory's 75th

(From Page 45)

broadcasts and daytime serials.

On Saturday, Aug. 26, 1939, when the double header baseball game between the Brooklyn Dodgers and the Cincinnati Reds was telecast for the first time in baseball history, the sponsors included "Ivory Soap," as well as General Mills and Socony-Vacuum.

The makers of "Ivory" like to think of their product as being a real pioneer in the field—not just an old-fashioned soap. They feel it pioneered from the beginning. It was the first inexpensive white soap. It was the first soap to float. It was the first soap to be advertised on a regular national basis. It pioneered in full page advertisements in color advertising and in introducing art to American advertising.

It pioneered in radio advertising from the days of the crystal set of the early Twenties and on through television.

Revolution of Wrapper

FIRST came the revolution of the wrapper. The first wrapper design—an ornate affair of checkerboards and curlicues—was perfectly suited to a world of tasseled lamps, Edwardian mustaches and honeymoon scrapbooks of Niagara Falls. Black and white, it looked good on the shelves of kitchens untouched by the hand of the interior decorator, a partner to the scrubbing board, the pot-bellied stove and the kettle that was always boiling. And what was more, the checkerboard design admirably concealed the dust that settled on the soap while it waited, in the slow-moving grocery stores, to be bought.

In 1920, to meet the phenomenal changes of a post-war jazz age, the makers of "Ivory" made a daring move. They removed the curlicues.

The Ivory Old Guard—faithful customers from the days of the horse and buggy—made few outcries. Instead, Ivory sales picked up. It seemed that the new genera-

tion, in its knee-length skirts and tubelike dresses, liked Ivory's new look.

To do much more to "Ivory" was to gamble with millions of dollars of good will. But the pressure of outside competition—and streamlined packaging—was becoming steadily greater. So the "Ivory" people removed the checkerboard, that dust-hider of the mid-Victorian days. A few scattered protests came in here and there, but they were mostly from those who were fighting a last-ditch stand against the automobile. The new generation approved; again "Ivory" sales increased. Encouraged by this, Procter & Gamble made the most daring change of all. Stripping the old design of all its antique frou-frou, they transformed "Ivory" into a lively blue and white modern design.

A new "Ivory" was in the making.

(To Be Continued)

Atkinson Names Chairman

D. E. Budgett-Meakin has been appointed chairman and managing director of J. & E. Atkinson of Old Bond Street, London, it was announced recently. Mr. Budgett-Meakin has been associated with the Atkinson overseas business since 1935 and has made several trips to the United States for the firm.

What's Ahead

(From Page 43)

solve the problem of eliminating lime soap formation during the rinse cycle.

Summary

BASED on present trends I believe that the following developments may take place:

1.—The competition between soap and syndets will foster technical advances for both products. We can expect that the synthetics will continue to make the larger and more spectacular gains. However, these gains will be hard won because of the lower price of soap.

Soap constitutes the major outlet for inedible fats and it is

difficult to imagine any great shortage of these fats in the immediate future.

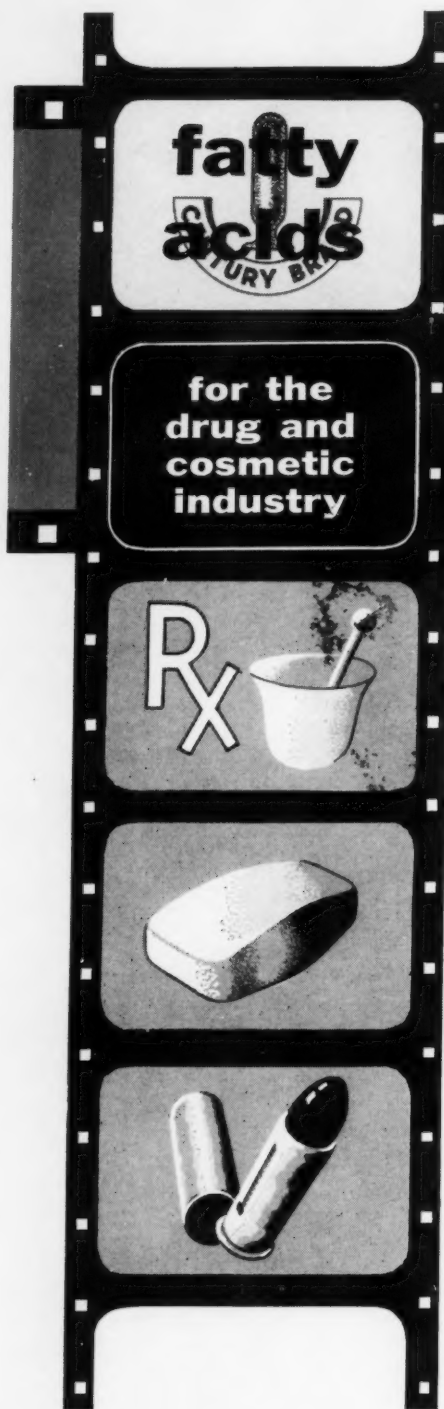
The competition between soaps and syndets is difficult to resolve and some believe it may better be regarded as a struggle between inedible fats and petrochemicals as raw materials for the detergent industry. Under present economic and political conditions, the long-term trend of petrochemical costs is up whereas most inedible fats are an unavoidable by-product of the food industry. Therefore, tallow-based syndets may shortly become vigorous competitors for the petrochemical-based products which now dominate.

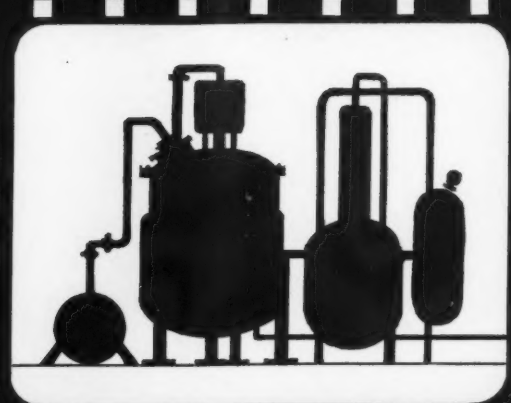
2.—There will be increased acceptance of bar detergents based at least partially on synthetic surfactants. The next 10 years may see the last of the "ring around the tub".

3.—The housewife of the future won't be as concerned if her detergent fails to give piles of foam. Detergents will be formulated to give maximum cleaning efficiency and other desirable properties—let the suds fall where they may.

4.—Use of liquid detergents will increase and heavy duty liquid syndets will be developed. It is possible that 50 years from now people will have to go to a museum to see a soap dish. Their homes could have a central supply of an all purpose liquid detergent which would be piped to showers, wash basins, sinks and automatic washing machines.

It appears to the casual observer that closer liaison between the chemical manufacturers, detergent formulators and appliance makers is needed. Many of the basic problems confronting the household detergent industry and equally important to the housewife in her every day activities are not clearly defined or understood. Much of this can probably be attributed to the failure of all parties concerned to recognize these problems or in some cases to even admit of their existence.





Century Brand fatty acids meet the demands of the drug and cosmetic industry for consistently high grade products.

If you require a **Triple Pressed Stearic Acid** with large crystals for sheen, **Century 1240** will meet your requirements. If you prefer a smaller crystal material, **Century 1230** is the grade for you.

If white esters of **Double Pressed Stearic** are your desire **Century** has **Double Pressed Stearic (1220)** which will give you such white esters and without bleaching.

If color is important in your **Oleic Acid** requirements for shampoos, etc., **Century** has a grade to meet your needs. Whether it be a certain color of standard distilled oleic or a water white double distilled, **Century** has the product to meet your requirements.

Write Today for a Catalogue and Samples

W. C. HARDESTY CO., Inc. Century Stearic Acid Products, Inc.

25 MAIN STREET, BELLEVILLE 9, NEW JERSEY

PLANT: DOVER, OHIO

In Canada: W. C. Hardesty Co. of Canada Ltd., Toronto



DOW PHENYL ETHYL ALCOHOL WILL ENHANCE YOUR SOAP PERFUMES

This rose-like fragrance provides luxury soap quality at a new low price that's practical for all types of soap formulations



"A rose by another name" could very well describe the full-bodied natural floral odor of Dow Phenyl Ethyl Alcohol 953. Free from chemical off-odors, this Dow product is a good blender and modifier. Also of importance, it has antioxidant and stabilizing properties and is nondiscoloring in the presence of alkali.

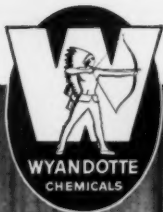
Since its introduction more than a year ago, this product has met with remarkable acceptance. Because of its increased availability, Dow now announces a

price reduction of Phenyl Ethyl Alcohol 953. It is now a standardized Dow product, but users of the 952 grade will still be supplied at their specific request.

Write for price data and a sample now. Examine and test its uniformity and quality in your own laboratory. See for yourself what it can do for your product. You'll find it an ingredient practical for—and worthy of—your soap product. THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW AROMATICS





Dependable Source for Chemical Raw Materials



J. Riccardi, President, Roman Cleanser Co., Detroit, Michigan.

"Wyandotte Caustic is particularly well suited to making a better bleach"

—J. Riccardi, President, Roman Cleanser Co.

"There is no secret in making a bleach that is stable, effective, and easy on the clothes and hands," states J. Riccardi, President, Roman Cleanser Company, Detroit, Michigan, a pioneer maker of household bleaches. "It starts with a pure Caustic which must not be contaminated with iron, and requires proper equipment and careful handling right through to the consumer.

"Wyandotte Caustic is particularly well suited to making a better bleach," states Mr. Riccardi whose experience dates back to 1919. "It's never over 3 or 4 parts per million iron. Once it gets to our plant, we see that nothing but pure rubber, plastic, or glass ever comes in contact with it.

"From our experience, we know that our Caustic from Wyandotte will always meet our requirements. The same holds true for the Chlorine we purchase from them. We know, too, that should we ever run into any difficulties, Wyandotte technical service is always as close as our telephone, ready to help us out. With this combination, our customers are always assured of getting the finest bleach money can buy."

Are you working with a supplier that controls quality with your products in mind? Are you getting the kind of technical assistance that is both prompt and practical? Wyandotte offers you quality-

controlled chemical raw materials, and helpful technical assistance in putting them to work advantageously for you. May we serve you? *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*



HEADQUARTERS FOR ALKALIES

Soda Ash • Caustic Soda • Bicarbonate of Soda • Chlorine
Calcium Carbonate • Calcium Chloride • Glycols • Synthetic
Detergents • Agricultural Insecticides • Soil Conditioners
Other Organic and Inorganic Chemicals

SOAP and CHEMICAL SPECIALTIES

Bids and AWARDS

P & G, Iowa Soap Awards

In a recent opening by the Post Office Department, Washington, D. C., Procter & Gamble Distributing Co., Cincinnati, obtained the award on item one with a bid of 5.58 cents, and Iowa Soap Co., Burlington, Ia. received the award on items two and three with a bid of 18.59 cents.

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FSS Low Soap Bids

In a recent opening for soap by the Federal Supply Service, New York, the following low bids were submitted: John T. Stanley Co., New York, on item 1, 8.75 cents, item 3, 9.25 cents, item 4, 13.5 cents; Kamen Soap Co., New York, item 2, 4.79 cents, and Stahl Soap Corp., Brooklyn, item 5, 11.05 cents.

— ★ —

Shaving Cream Award

Comfort Mfg. Co., Chicago, won the award on brushless shaving cream in a recent opening for miscellaneous supplies by the Veterans Administration, Washington, D. C. Comfort bid as follows: item 1, 95 cents, item 2, 98 cents, and item 3, 88 cents.

— ★ —

FSS Soap Bid

Procter & Gamble Co., Cincinnati, submitted the low bid of \$3.84, 30 days, on soap in a recent opening for miscellaneous supplies by the Federal Supply Service, Cleveland.

— ★ —

Kamen Soap Award

Kamen Soap Co., New York, won the award on soap with a bid of 3.36 cents in a recent opening for miscellaneous supplies by the Panama Canal Company, Washington, D. C.

— ★ —

Dishwash Compound Bids

Clarkson Labs., Philadelphia, and Sterling Supply Corp., Philadelphia, were the low bidders on 60,000 pounds of dishwashing machine compound in a recent opening for miscellaneous supplies by the

Navy Department, General Stores Supply Office, Philadelphia. Clarkson bid 7.56 cents on item 1a, and Sterling bid 9.7 cents on item 1b.

— ★ —

Soap, Borax Powder Award

Pacific Coast Borax Co., Los Angeles, Calif., received the award in a recent opening for soap, borax powder by the Federal Supply Service, Denver. Pacific Coast's bids were item 1, 3,000 cartons, 58.5 cents; item 2, 3,000 cartons, 42 cents.

— ★ —

Low Cowles Bid

In a recent opening for dishwashing compound by the Quartermaster Purchasing Agency, New York, Cowles Chemical Co., Cleveland, submitted the low bid of 5.85 cents (domestic) on item (a), and 6.1 cents (export) on item (b).

— ★ —

Dishwash Comp. Awards

In a recent opening for dishwashing compound by the Quartermaster Purchasing Agency, New York, two companies received the following awards: Cowles Chemical Co., Cleveland, item 1, 480,000 lbs., 6.28-6.33 cents, item 2, 395,000 lbs., 5.35-5.4 cents. Turco Products, Inc., Los Angeles, item 1, 6,000 lbs., 8.14 cents, item 2, 3,900 lbs., 7.27 cents.

— ★ —

Prentiss Rodenticide Bid

In a recent opening for rodenticide by the Navy Purchasing Office, New York, Prentiss Drug & Chemical Co., New York, submitted the low bid of \$1.74.

— ★ —

Low Bid By Chase

Chase Products, Co., Maywood, Ill., submitted the low bid of 45 cents in a recent opening for insecticide by the Federal Supply Service, New York.

— ★ —

Sweeping Compound Award

In a recent opening for sweeping compound by the Federal Supply Service, Kansas City, Mo., the award was won by Maule Chem-

ical Co., Kansas City, Mo., with a low bid of \$1.89.

— ★ —

Low Cleaner Bid

Harley Soap Co., Philadelphia, submitted the low bid of 62 cents on non-abrasive, all purpose cleaner in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C.

— ★ —

Pacific Coast Award

Pacific Coast Borax Co., Los Angeles, won the award on borax soap powder in a recent opening for miscellaneous supplies by the Federal Supply Service, Atlanta. Pacific bid 45.55 cents on item 1, and 59.5 cents on item 2.

— ★ —

Low Bid by Barcolene

Barcolene Co., Boston, submitted the low bid of \$663.60, 30 days, on soap in a recent opening for miscellaneous supplies by the Federal Supply Service, Kansas City, Mo.

— ★ —

Low Laundry Soap Bid

Standard Soap Co., Camden, N. J., submitted the low bid of 8.9 cents on laundry soap in a recent opening for miscellaneous supplies by the Federal Supply Service, New York.

— ★ —

Nyleen Soap Award

Nyleen Corp., Kansas City, Mo., received the award on soap powder with a bid of 3.97 cents in a recent opening for miscellaneous supplies by the Federal Supply Service, Kansas City, Mo.

— ★ —

Capitol Soap Low Bid

Capitol Soap Corp., Clifton, N. J., submitted the low bid of 1.7 cents on sweeping compound in a recent opening for miscellaneous supplies by the Federal Supply Service, New York.

— ★ —

Navy Award to Cowles

In a recent opening for powdered steam cleaning compound by the Naval Shipyard, Portsmouth, N. H., Cowles Chemical Co., Cleveland, won the award with a bid of 8.25 cents a pound on item 1.

Gerandalol *Lavandalol*



Two valuable aromatics for users of
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Stable
Lasting
Effective
Economical

Schimmel & Co., Inc.

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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany notice of opposition.

Renuzit—This for self polishing wax. Filed Sept. 23, 1948 by Renuzit Home Products Co., Philadelphia. Claims use since Aug. 20, 1948.

Kilathon—This for insecticides. Filed Oct. 8, 1953 by William Cooper & Nephews, Inc., Chicago. Claims use since Sept. 23, 1953.

Solacrid—This for acaricides and miticides. Filed Oct. 8, 1953 by Geigy Co., New York. Claims use since Sept. 10, 1953.

Empol—This for soaps, insecticides, etc. Filed Oct. 16, 1953 by Emery Industries, Inc., Cincinnati, O. Claims use since Sept. 22, 1953.

Vitrafos—This for calcium-sequestering agent for dishwashing compounds, etc. Filed Oct. 16, 1953 by Victor Chemical Works, Chicago. Claims use since Aug. 28, 1953.

Yofa—This for shaving creams. Filed April 7, 1952 by Amole, Inc., Dayton, O. Claims use since March 12, 1952.

Coronet—This for shaving creams. Filed April 28, 1953 by Mennen Co., Morristown, N. J. Claims use since Dec. 30, 1952.

Lime-solv—This for liquid detergent for dishwashing and metal surfaces. Filed October 22, 1953 by Allied Home Products Corp., Beloit, Wis. Claims use since Aug. 10, 1949.

Filt-a-out—This for dry cleaning soap for fabrics. Filed Nov. 7, 1952 by Caled Products Co., Cottage City, Brentwood, Md. Claims use since Nov. 15, 1954.

E-con o clene—This for metal and paint cleaners, floor washing material. Filed Nov. 15, 1952 by Bendix Aviation Corp., Detroit. Claims use since Sept. 20, 1952.

trav—This for powdered detergent for laundering of fabrics and dishes. Filed Dec. 5, 1952 by Warren B. Lammert, doing business as Trav Co., St. Louis, Mo. Claims use since Nov. 25, 1952.

Tergasan—This for detergent-sanitizer. Filed Apr. 2, 1953 by Dr. Salsbury's Laboratories, Charles City, Ia. Claims use since on or about Mar. 9, 1953.

Kleen King—This for metal cleanser. Filed May 18, 1953 by Kleen King Home Products Co., Burbank, Calif. Claims use since Nov. 14, 1947.

Fore-site—This for shampoo. Filed May 27, 1953 by Prince Corp.,

South Orange, N. J. Claims use since May 18, 1953.

Lixoil—This for liquid skin cleaner. Filed Aug. 12, 1953 by Lixoil Laboratories, Boston, Mass. Claims use since Oct. 3, 1952.

Merry—This for general purpose detergent. Filed Oct. 5, 1953 by Colgate-Palmolive Co., Jersey City, N. J. Claims use since June 22, 1953.

Quick Beauty—This for protective polish. Filed November 5, 1952 by Adelbert G. Cranney, Waverly, Mass. Claims use since April 5, 1952.

Candy's No. 1012—This for self polishing wax. Filed July 20, 1953 by Candy & Co., Chicago. Claims use since June 27, 1952.

Candy's No. 1016—This for self polishing wax. Filed July 20, 1953 by Candy & Co., Chicago. Claims use since Feb. 11, 1953.

Barton's—This for polishes for leather goods. Filed Sept. 1, 1953 by Barton Manufacturing Co., St. Louis, Mo. Claims use since 1917.

Difficult Kleen—This for cleanser and stain remover. Filed Sept. 14, 1953 by Acme Chemical Co., Milwaukee. Claims use since 1922.

Meadow Sweet—This for air deodorant. Filed Jan. 13, 1953 by Stanley Home Products, Inc., Westfield, Mass. Claims use since Sept. 28, 1950.

Diamond Alkali Brand—This for insecticides, rodenticides, fungicides, herbicides, etc. Filed April 27, 1953 by Diamond Alkali Co., Cleveland. Claims use since July 1949.

Tox-I-Seal—This for wood preservative. Filed Aug. 28, 1953 by Pease Woodwork Co., Inc., Cincinnati. Claims use since April 2, 1939.

Moth-Snub—This for moth-proofing compositions. Filed Aug. 31, 1953 by Arkansas Co., Newark, N. J. Claims use since Aug. 1, 1953.

Plant Marvel—This for insecticide spray. Filed Oct. 23, 1953 by Joseph D. Slater doing business as Plant Marvel Laboratories, Chicago. Claims use since Aug. 21, 1953.

P C M X—This for antiseptics and germicides. Filed June 2, 1953 by Ottawa Chemical Co., Toledo, O. Claims use since Jan. 3, 1950.

Abco—This for general purpose cleansers, detergents and soap products in liquid, powdered and solid form. Filed Feb. 28, 1951 by Abco, Inc., McKeesport, Pa., by change of name from Apter Bros. & Co. Claims use since 1946.

Scandinavian—This for non-abrasive detergent household cleaner. Filed April 14, 1952 by Anderson Chemical Co., Litchfield, Minn. Claims use since Mar. 25, 1952.

Mur-Sani-Sol—This for deodorant and sanitizing detergent compositions. Filed March 11, 1953 by Murphy Chemical Corp., Philadelphia. Claims use since Sept. 5, 1952.

Glossette—This for sudsing cleaner, cleanser and detergent. Filed Aug. 4, 1953 by Hewitt Soap Co., Dayton O. Claims use since May 8, 1953.

Vivian Verne—This for shampoos. Filed Aug. 17, 1953 by Vivian Levine, doing business under the name

of Vivian Verne, Chicago. Claims use since Sept. 13, 1948.

Trip—This for liquid detergents. Filed Aug. 21, 1953 by Winzer Co., Dallas Tex. Claims use since on or about November, 1950.

Dishuds—This for liquid dishwashing compound. Filed Aug. 26, 1953 by C. B. Dolge Co., Westport, Conn. Claims use since June 1, 1953.

summer shower—This for bath soaps. Filed Oct. 13, 1953 by Prince Matchabelli, Inc., New York. Claims use since May 28, 1953.

Myna—This for sprayed liquid glass cleaner. Filed October 23, 1953 by Zonite Products Corp., New York. Claims use since Aug. 28, 1953.

Kyro—This for sudsing cleaner, cleanser and detergent. Filed Oct. 26, 1953 by Procter & Gamble Co., Cincinnati. Claims use since Dec. 31, 1921.

Pepco-Fome—This for hand cleaner. Filed Nov. 9, 1953 by Peck's Products Co., St. Louis, Mo. Claims use since Mar. 10, 1953.

Pexolv—This for general cleaning compound. Filed Nov. 9, 1953 by Peck's Products Co., St. Louis, Mo. Claims use since 1946.

Alsol—This for auto wax. Filed April 27, 1953 by Alsol Products Co., Newark, N. J. Claims use since Aug. 10, 1952.

Washine—This for liquid sodium hypochlorite bleach. Filed Feb. 18, 1952 by Washine National Sands, Inc., New York. Claims use since May 1921.

Sanico—This for deodorizer. Filed March 27, 1952 by Sanitation Associates, Cleveland. Claims use since July 11, 1950.

Penta-Cure—This for chemical wood preservatives. Filed Feb. 3, 1953 by Apperson Chemicals, Inc., Jacksonville, Fla. Claims use since 1946.

Divo-Kill—This for insecticides. Filed August 25, 1953 by Diversey Corp., Chicago. Claims use since June 24, 1953.

Zepheryll—This for chemical compound for use in air deodorizing preparations. Filed October 30, 1953 by Drackett Co., Cincinnati. Claims use since May 22, 1953.

Folbex—This for miticide. Filed Nov. 2, 1953 by Geigy Chemical Corp., New York. Claims use since Oct. 5, 1953.

Belloid—This for dispersing agents. Filed Nov. 2, 1953 by Geigy Chemical Corp., New York, N. Y. Claims use since April 12, 1951.

E-Z Way—This for insecticides. Filed Nov. 2, 1953 by Hilco, Inc., Fort Worth, Tex. Claims use since Feb. 1, 1953.

Ameroid—This for rust inhibitor. Filed November 9, 1953 by E. F. Drew & Co., New York. Claims use since Jan. 2, 1950.

Acqua—This for laundry starch, ammonia and bluing. Filed Nov. 17, 1953 by Acqua Lina Manufacturing Co., Brooklyn. Claims use since April 1952.

Trophy—This for liquid wood floor sealer. Filed March 18, 1953 by Hillyard Chemical Co., St. Joseph, Mo. Claims use since Feb. 2, 1953.

Sta-Suede—This for cleaning compositions for suede. Filed April 14, 1953 by Robert F. Stearns, doing business as Stearn's Enterprises, Ar-

(Turn to Page 85)

HOUCHIN MACHINES produce the Majority of America's Finest Soaps



CASCADES of SOAP—

FLOW FROM HOUCHIN MILLS, PLODDERS AND CUTTERS
Houchin Mills, Plodders and automatic cutters, used for all kind of soaps, reduce the time between mills and wrappers, substantially increasing hourly production. At the same time they enhance quality.

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Crutchers — Amalgamators — Mixers — Chilled Iron and Granite Roll Mills — Plodders —
Foot and Air-Operated Presses — Soap Frames — Slabbers — Cutters — Powder Mills —
Remelters — and other kindred equipment.

We are also exclusive worldwide sales distributors for VAN BUREN HIGH SPEED AUTOMATIC SOAP CUTTING and WRAPPING MACHINES.

HOUCHIN MACHINERY CO., INC.

Manufacturers of Soap Making Equipment Since 1840
HAWTHORNE, NEW JERSEY, U.S.A.

Spray Tower Shut-Off System

OVERHEATING and fire are now remote possibilities in the continuous spray drying towers in Lever Brothers plants because of a well-planned, thermostatically-actuated safety system. The system automatically shuts down the drying operation and actuates a variety of devices to retard combustion in case fire or overheat conditions develop inside the towers.

The function of the drying towers is to evaporate water from a product-and-water slurry that enters in a continuous stream at the top of the tower. As the slurry moves down through the tower, it contacts a stream of heated air which extracts the water and exhausts it into the atmosphere. The dried soap collects in granular form at the base of the tower.

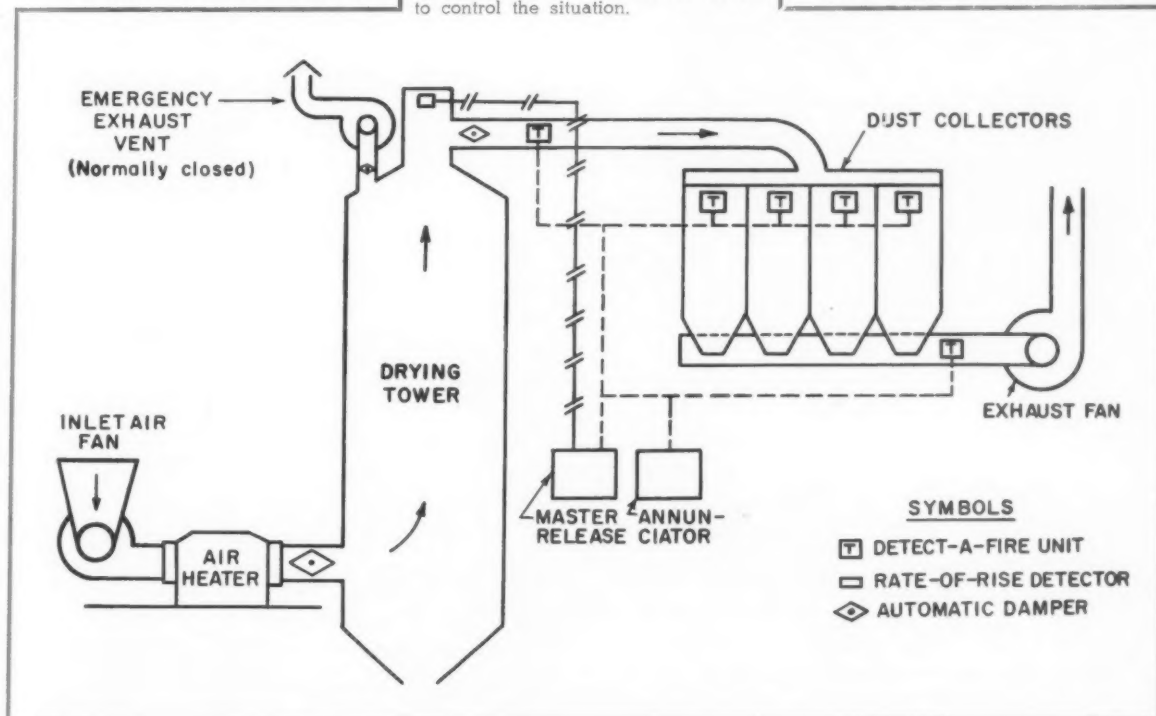
Because the hot air is fed

Thermostatic safety system shuts down spray drying tower automatically and actuates devices to retard combustion in case of fire or overheat conditions.

continuously into the tower, certain types of malfunctions, such as stoppage of slurry flow, could result in a serious overheating inside the tower, perhaps to the ignition point of the product. Hence, an elaborate system of safeguards was built into the towers to sense abnormal heating conditions and take remedial action before dangerous temperatures are reached.

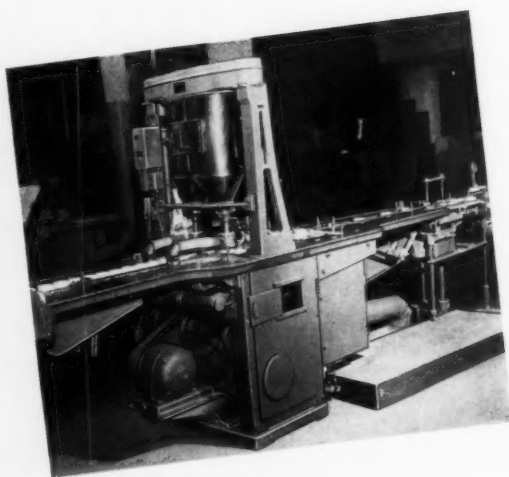
The safety system, for the most part, is triggered by thermostatic controls located at various potential danger points. Two such controls are located at the upper part of the tower where the greatest heat build-up usually occurs. One of these controls is a rate-of-rise detector which responds when the tower temperature rises at an abnormal rate. The other is a "Detect-A-Fire" unit, a fixed temperature detector manufactured by Fenwal Inc. of Ashland, Mass. In addition, each of the dust collector bins that extract finely-divided dust from the exhaust air

Figure 1. Schematic diagram of the automatic protection and alarm system in the drying towers and dust collectors in Lever Brothers Co. plants. When any of the detectors sense a fire or overheat condition, the master release system actuates a series of devices to control the situation.



**Always
a CLEAN
ACCURATE
fill**

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MODERN FILLING MACHINES**



*View of the S & S HG-84 Automatic
Heavy Duty Duplex Filler at Avon Products,
Incorporated, Suffern New York*

Whatever your product, profits begin with accurate filling. You can maintain this vital accuracy in your operations with S & S Filling equipment. There is an S & S Filler for most every product; paste, granular substance or powder. Prompt attention will be given to your request for complete information.



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stream is protected with a "Detect-A-Fire" unit. To protect both the process and equipment against abnormal heating and possible fire, the detectors trigger an automatic safety system, which Lever Brothers Co. engineers call the "master release" (see Fig. 1).

The purpose of the master release is to shut off the heater and cut off the forced draft system so as to create poor combustion conditions inside the tower. When the master release operates, the following things take place:

- (1) The air heater shuts off, eliminating further heat input.
- (2) The air inlet exhaust fans shut off and their corresponding dampers are closed, eliminating the normal air stream in the tower.
- (3) A special damper in the exhaust stack opens, venting collected heat to atmosphere.
- (4) Alarms sound both in the plant and at a central fire station to summon assistance to the scene.

In addition to the automatic shutdown of equipment during an overheat emergency, a manually-operated water spray fire extinguishing system inside the tower is available for use at the discretion of plant personnel.

Difficult service conditions inside the towers required a careful selection of the actuating controls. The fine soap dust always present inside the towers presents a

serious problem in obtaining reliable, instantaneous operation of the overheat detectors. This problem was overcome by selecting a hermetically sealed detector. As shown in Fig. 2, the contacts that actuate the master release circuit are hermetically sealed inside a stainless steel outer shell, which protects them against dust, water and possible corrosion. Because of the hermetic seal, the units are inherently explosion proof and therefore safe to use in any atmosphere containing dust or combustible gases. Furthermore, the detectors are self-resetting, so that they will operate repeatedly without resetting or readjustment. Normally-closed detectors are used in the master release circuit, so that, in case of a break in the wiring, the system will fail "safe".

The drying towers are equipped with other devices. For example, the air heater itself is equipped with a timing device that assures an air purge of the heater and tower for a predetermined period before the igniter for the heater can be actuated. Flame failure controls shut down the heater in case the heater flame is inadvertently extinguished. Furthermore, the operation of the heater is interlocked with the safety controls in the rest of the equipment, so that the heater cannot be started or will cease operation if air flow

through the tower is interrupted or other abnormal conditions exist.

The result of this system of interlocks and overheat controls is a continuous soap and detergent drying process that is as well safeguarded against mechanical and human failure as careful engineering could make it.

— ★ —

Link-Belt Drum Dryer

"Roto-Louvre" drum dryer and cooler is described and illustrated in a 19-page brochure issued recently by Link-Belt Co., Chicago. Great versatility is claimed for this machine which is suggested for the processing of over 200 different materials including soap. The unit consists of a revolving horizontal drum comprising a solid shell of fixed diameter and a slotted inner shell that increases in diameter from input end to discharge end. The tapered inner shell is made of shaped plates which overlap to form full-length slots or louvres. These support the material bed and permit air to pass freely without loss of material. As the drum revolves, air introduced into the channels passes upward through the constantly agitated material, insuring intimate contact with the entire surface of each particle.

Used as a dryer, the "Roto-Louvre" utilizes gradual position heat transfer by convection. In a combined drying-cooling operation heated and cooled air can be fed simultaneously with the respective lengths of drying and cooling areas governed by the process involved. As a cooler the unit uses air at ambient temperature or air from a cooling unit.

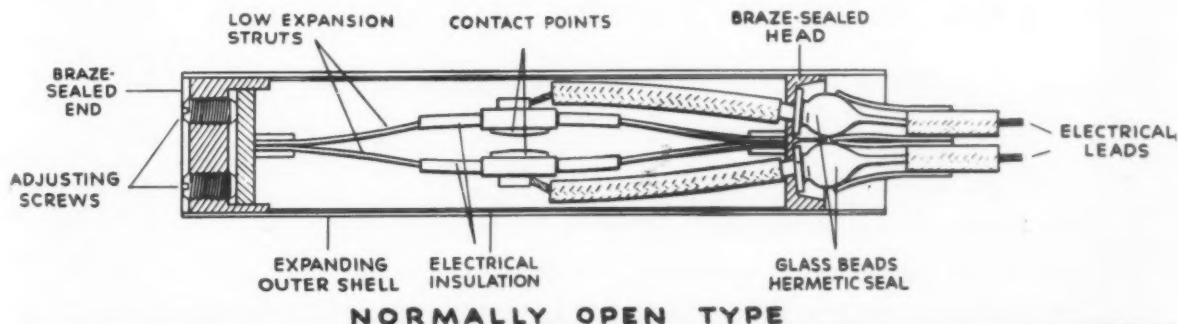


Figure 2. Cut-away of one of the "Detect-A-Fire" units, the hermetically sealed detector, located in the drying towers and dust collectors to trigger the master release system. Lever Brothers Co. uses a normally-closed type to provide a fail-safe circuit.



Deodorants with **G-11**[®] (Brand of Hexachlorophene) remove the cause of body odor

Soaps, detergents, creams, colognes, sticks and lotions containing G-11 are making dramatic sales increases because they combat the fundamental cause of body odor.

Body odor, particularly underarm odor, is caused by the action of skin bacteria on perspiration. Research has shown fresh perspiration to be odorless until it is contaminated with skin bacteria. G-11 combats these bacteria and thus removes the basic cause of the odor.

G-11 remains on the skin, even from soaps which are thoroughly rinsed off with water. Thus the deodorant action

persists for days. Persons who have used deodorants with G-11 for three and four years show no immunity to their action.

Over seventy scientific articles, mostly by independent researchers, have been published over the last ten years attesting to the antibacterial and deodorant performance of G-11.

In addition, G-11 is not perceptible while on the skin, has no harmful effect on clothing, is compatible with perfumes, is readily soluble in soaps and cosmetic formulations, and is non-staining and non-irritating.

Write now for technical bulletins and formulas for G-11.

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Clear Detergent Shampoos

MANUFACTURERS of transparent liquid shampoos will find sodium lauryl sulfate unsuitable as a base for their product because of its low solubility in cold water. Solutions, sufficiently concentrated to produce a good lather, become cloudy on moderate cooling and deposit a heavy white precipitate in winter weather.

Neutralization of sulfated lauryl alcohol with ammonia or an organic base in place of sodium hydroxide yields suitable bases for transparent liquid shampoos. Ammonium lauryl sulfate is marketed as a viscous, amber colored solution containing approximately 30 percent active material. The cloud point is influenced by the amounts of unsulfated fatty alcohol and inorganic salts present in the solution. One successful product lists as inert ingredients 1.5 percent to three percent free fatty alcohol and around two percent each of ammonium chloride and ammonium sulfate. Higher concentrations of inorganic salts cause poor solubility in cold water.

Ammonium lauryl sulfate in this form has a slightly acid pH (5.5 - 6.5). Stepan Chemical Co., Chicago, has patented (U.S. 2,599,665) an acid shampoo based on ammonium lauryl sulfate buffered with boric acid to maintain a pH close to that of the skin.

The triethanolamine salt of sulfated lauryl alcohol is most suitable for use in clear liquid shampoos because it remains clear at temperatures down to 5°C. It combines good foaming properties and mild action on hair and scalp. Available in concentrated solutions containing around 40 percent active material it varies in color from light yellow to amber.

The proportion of active material present in various shampoo formulations based on lauryl sulfates varies from 10 to 25 per-

cent. However, a 10 percent solution of triethanolamine lauryl sulfate contains less sulfated fatty alcohol than a 10 percent solution of ammonium lauryl sulfate, because the former has a higher molecular weight than the latter. The strength of lauryl sulfate solution is therefore more accurately expressed in terms of fatty alcohol sulfate content than in terms of percent active material.

Thickening agents, perfume, and in some instances a hair conditioner, are needed to transform a dilute solution of lauryl sulfate detergent into a shampoo. Non-ionic surfactants such as alkylolamides of the "Ninol" type and certain fatty acid esters of polyethylene glycols are recommended as thickeners for dilute solutions of anionic detergents. Alkylolamides have detergent properties and can be considered active ingredients of the shampoo. They give a viscous solution at a concentration of two percent but proportions of up to five percent have been used in liquid shampoos. The polyglycol esters, suitable for incorporation as thickening agents in these products include the distearates of polyethylene glycol 400 and 600 both dispersible in hot water, and the dilaurate of polyethylene glycol 1000, which is water soluble. The use of these compounds as thickeners may make the addition of a separate hair conditioner unnecessary, since

they help to control the degreasing action of the detergent.

Some of the new polyoxyethylene derivatives of lanolin, such as "Lanogel No. 31" and "Atlas G-1441," are useful as hair conditioners in clear detergent shampoos, since they form transparent colloidal dispersions in water. A complex fatty amide, "Emcol 61," is recommended for this purpose and is said not to interfere with foaming action of the detergent. The product is adsorbed on the hair from solutions leaving it glossy and manageable after shampooing.

The following formulas illustrate the use of these special ingredients in clear detergent shampoos. Viscosity is easily adjusted by varying the proportion of thickening agent.

I

Triethanolamine lauryl sulfate..	94
Propylene glycol	4
Oleic monoethanolamide	2
Water to give an active-material content of 26%	

II

Duponol WAT	50
Polyethylene glycol 400 distearate	5
Water	45

III

Duponol EP	50
Ninol 201	3
Polyethylene glycol 600 distearate	1

Triethanolamine salt of sulfated lauryl alcohol is most suitable for use in clear liquid shampoos because it remains clear at temperatures down to 5°C. It also combines good foaming properties, mildness.

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The well known coconut supplies
A. Gross & Company with raw material
for two grades of distilled
COCONUT FATTY ACIDS — applicable
in innumerable industries.

let A. Gross & Company be yours

Whether you need single distilled
COCONUT FATTY ACIDS or a special
grade of double distilled material
with most of the caproic, caprylic
and capric constituents removed,
A. Gross can give you what you want.
Light colors, freedom from metallic
contamination, uniform titre and
acid value ranges are only a part
of the GROCO COCONUT FATTY ACID
picture. Try a sample and let us
be your source of raw material.

GROCO 24 REGULAR GROCO 26 SPECIAL

Titre	22° — 25° C.	26° — 28° C.
Color 5¼" Lovibond Red	1 — 3	1 — 3
Color 5¼" Lovibond Yellow	8 — 12	8 — 12
Color — Gardner 1933	2 — 4	2 — 4
Unsaponifiable	0.25% — 0.50%	0.25% — 0.50%
Saponification Value	261 — 270	250 — 257
Acid Value	260 — 269	250 — 257
Iodine Value (WIJS)	6 — 12	8 — 14

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A. Gross & Company

Manufacturers Since 1837

295 Madison Ave., New York 17, N. Y.

Factory, Newark, N. J. Distributors in Principal Cities

Soluble lanolin (Atlas G-1790)	1
Sodium chloride	1
Water	44

Procedure: Dissolve sodium chloride in water, add other ingredients and heat to 160 - 170° F. SSstir until solution is homogenous.

The organic salts of sulfated lauryl alcohol have only a very slight odor and are easy to perfume. However, the ammonium salt has a rather strong odor especially after aging. Certain of the amides suggested as thickeners or hair conditioners may contribute some odor to the shampoo base. Triethanolamine lauryl sulfate is a good solubilizer for perfume oils. The clarity of these shampoos therefore is not affected by their presence. *Schimmel Briefs*, April 1954.

Demineralization Brochure

The subject of demineralization is extensively treated in a 24-page illustrated brochure issued recently by Graver Water Conditioning Co., a division of Graver Tank and Manufacturing Co., New York. How the removal of ionized solids from water by means of ion exchange aids manufacturing operations in various fields is described, as well as the advantages afforded by demineralization of boiler feed-water. The cost of demineralized water is shown to be 10 to 50 percent below that of distilled water.

Booklet on Solvents

Central Solvents & Chemicals Co., Chicago, recently published a new edition of its pocket size reference book entitled *Organic Solvents*. This 64-page publication is intended for the information of non-technical personnel and explains in simple terms the properties of certain groups of products. Some of the technical language commonly applied to them is also discussed. Individual compounds offered by Central Solvents are then described in text and tables of properties, and the practical import and meaning of these properties is pointed out.

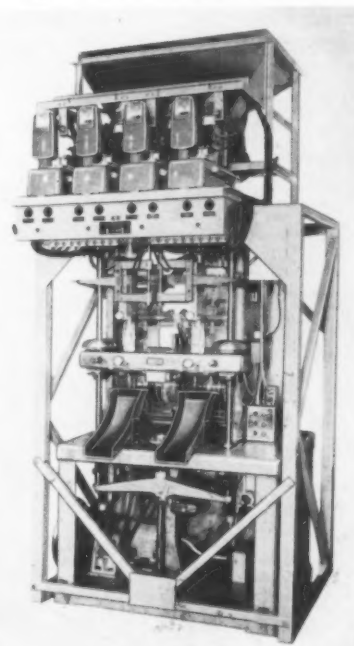
New S&S Packaging Unit

A new and improved packaging machine designed for the automatic packaging of items not suitable for volumetric filling was announced recently by Stokes and Smith Co., Philadelphia. The addition of a battery of net weight scales manufactured especially for the new unit by Woodman Co. is a feature of the new packaging machine. Use of multiple scales permits the machine to maintain filling speeds of up to 60 packages per minute. Bulk and dribble feed are claimed to assure accuracy of fill. The major portion of the product is first fed into the weighing bucket and precise weight is then reached by dribble feed.

The new Stokes and Smith packaging machine, designed for the filling of many free-flowing and mixed materials, forms, fills and heat seals packages from any approved heat sealing film, paper or foil. Package limits range from 13/16 of an inch wide by one inch long to 5 1/16 inches wide by 12 1/2 inches long.

A two color specification sheet covering the new automatic

New automatic packaging machine of Stokes and Smith Co., Philadelphia.



packaging machine is now available from the company at 4992 Sumnerdale Ave., Philadelphia 24. It illustrates and describes the new unit and lists details of operation and design. Complete specifications as to operating speeds, size capacities, package types and packaging materials handled are covered in the bulletin (No. 4966-W).

Permutit Data Book

Permutit Co., New York, has recently published a new edition of its pocket size *Water Conditioning Data Book*. Hydraulics; impurities in water; chemical conversions; coagulant, acid, and alkali dosages; chemicals used in water treatment; alkalinity relationships, specific gravities, chemical reactions; and numerous other subjects of interest to the engineer are covered in this 108-page reference booklet. Data Book No. 2478 A is available to practicing engineers and those who work with water conditioning problems.

Detergency Testing

Detergency Evaluation and Testing by J. C. Harris, Interscience Publishers, Inc., New York, manual 4. 7 1/2 inches by 5 inches, cloth bound, 210 pages, price \$3.75. The author of this reference work is director of application research for the merchandising division of Monsanto Chemical Co. He presents a collection of physico-chemical methods proven successful in separating the potentially useful surface active agents from those unlikely to be useful. Screening tests, cotton washing and cotton wash test methods, wool washing, washing procedures for other fibers, hard surface cleaning and miscellaneous tests are collated and fully described. A section on the application of radioactive tracers to measurements in the detergency field is included. Each chapter is followed by a bibliography. This book should prove valuable to the newcomer in the detergent field as well as to those experienced in the evaluation of detergents.



MECCANICHE MODERNE

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(Italy) BUSTO ARSIZIO

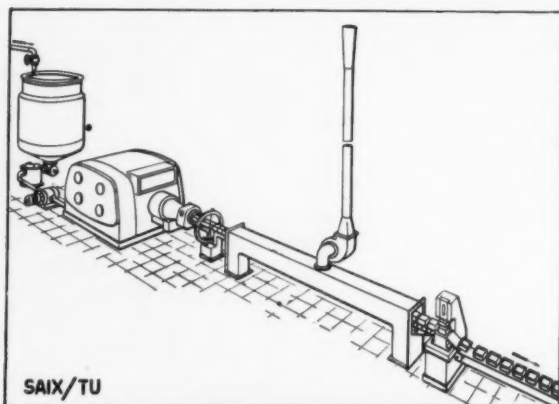
PATENTED Cooling Extruder Type SAIX for the continuous chilling and finishing of every kind of laundry soap, with 62%, 52% as well as with a T.F.M. content as low as 35%, either from full boiled kettle soap or from soap pads by a continuous process.

From the saponification (molten hot soap) to the finished bars (cold solid soap) in a single stage without any interruption or structural change. In this plant, completed by a preliminary evaporator of the

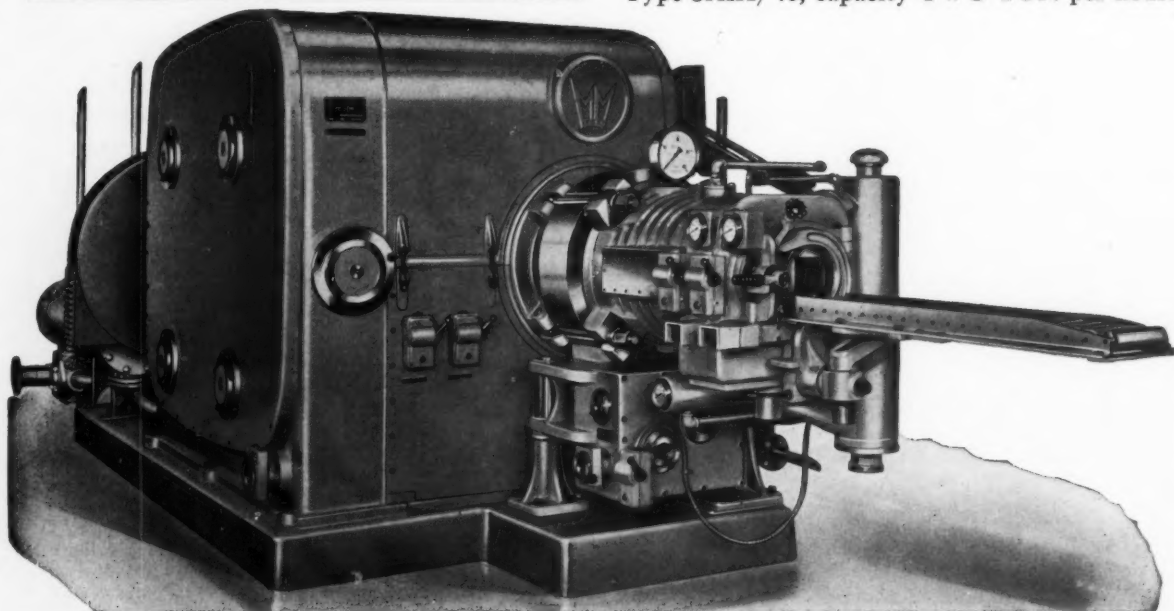


molten hot soap, it is possible to manufacture 72-73% T.F.M., soaps with an opaque, translucent or transparent appearance. The soap is continuously formed in bars of every desired size or in pellets for further milling procedure.

In this plant it also is possible to manufacture conventional or transparent toilet soaps without any formation of hard spots.



Type SAIX/1c, capacity HALF TON per hour.
Type SAIX/2c, capacity ONE TON per hour.
Type SAIX/4c, capacity TWO TON per hour.



PATENTED COOLING EXTRUDER Type SAIX/4c

PRODUCTION *Clinic*

By **E. G. Thomssen, Ph.D.**

MERCHANDISE sampling to introduce a new product should take the fullest advantage of a favorable first impression. As a means of bringing a new product to the attention of the consumer, sampling is unsurpassed. Its chief value is that generally the product is given a try-out by the consumer, and almost at once. Since sampling is an expensive promotional effort, care should be exercised in the way it is conducted to achieve maximum effectiveness.

To obtain a favorable first impression on the part of the consumer, packaging for the new product being sampled should be neat and clean in appearance. The container should be large enough to hold an adequate sample, be easy to handle, and dispense the product readily. Label and other information should be legible, clear and concise.

A classic example of a successful, nation-wide sampling campaign was conducted some years ago by Procter & Gamble Co., Cincinnati, to introduce the new synthetic detergent, "Tide." The phenomenal sales rise of this product to the top of the heap of packaged soaps and detergents is history. Contributing to this success of "Tide's" introduction was the skillfully handled program of sampling. A similar operation, on behalf of P&G's "Blue Cheer," contributed to the success of that product. The main variation between the two samplings was that "Blue Cheer" was handed to housewives in an opened package, which required them to use the product almost at once.

One of the large soapers recently conducted a mail sample of a new product it was introducing in a highly competitive field. A generous sample of the product - a two weeks' supply - was put in a

well designed package. A circular describing clearly and concisely the advantages of the product accompanied the sample. The writer used all of the sample and learned to like the product so well that he purchased an additional supply. Others who received samples reported they did likewise. Follow-up sales of the new product more than made up for the cost of the sample, which was more expensive than most. As a result of this sampling 45 percent of the test market bought the product initially and the figure was stabilized at 30 percent.

A manufacturer's meeting where sampling policies were discussed by members of the executive, sales, and production departments was attended by the writer some time ago. The product under review enjoyed use by a restricted public but showed great potentialities if it could capture wider attention.

Methods of distribution were studied first, including house to house or mail delivery, distribution over the retailer's counter or by a coupon in publication advertising. The last method was chosen for two reasons: it combines economy with the opportunity of reaching

people who could not be given a sample directly. The size of the campaign in terms of territory and number of samples was discussed next. It was decided to use newspapers at first. A reader response of less than ten percent was expected from the newspaper campaign. The size of the sample and the charge to be made when a coupon was returned were considered. The use of a small package, generous enough to be later merchandized as a regular item was recommended. Distribution of circulars on a house to house basis was decided upon for some localities. The leaflets were to offer the item free with the purchase of another of the company's products, while the retailer received his regular profit on both items. This sampling procedure produced a satisfactory increase in sales volume and was expanded to a nation-wide scale.

However, there are samples, which are more likely to prejudice the recipient against the product than to win new friends for it. Such samples are cheaply produced; they bear only slight resemblance to the regular package; they are accompanied by a poorly written circular and contain so little of the actual product that the prospective consumer cannot evaluate its properties.

Sampling deserves careful attention and suggestions by the production department. Although a sampling campaign may temporarily increase the burden of detail work, it will finally result in increased production volume if sufficient care has gone into the planning and execution.

However, sampling is by no means confined to finished products. Sampling of raw materials, whether by request or unsolicited, is of utmost importance. Samples of powdered materials in flimsy paper bags or liquids in unsuitable bottles, bearing cheap labels, are commonly mailed to production men. Such packages often arrive with their contents leaking and, instead of being sold by the sample, the recipient throws it in the waste

Dr. Thomssen





teacups
to
textiles



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basket. Insufficient protection and breakage of a bottled sample or faulty closures produce similar results.

A well conducted sampling campaign is a great sales getter, but poor sampling practices irritate the potential customer and impair the prestige of the manufacturer.

Blacklite Inspection Aid

"**B**LACKLITE" is a portable device offered by Scientific Instrument Co., Brooklyn, N. Y., as an inspection aid for laundries, food establishments and sanitary engineers. The unit emits rays, invisible to the human eye, which produce fluorescence in certain materials thus facilitating their detection. The rays are said to be harmless to the eyes and skin. "Blacklite" units carry their own power supply, are operated by a hand switch.

Phosphate Anti-Foamer

FOOD Machinery & Chemical Corp., Nitro, W. Va., is marketing tributyl phosphate for use as an anti-foam agent. An addition of less than one percent is usually sufficient for effective action, according to the manufacturer.

Portable Steam Cleaner

A NEW, portable, pressurized steam cleaner was introduced recently by Halkirk Co., Manhattan Beach, Calif. It is recommended for dust-free cleaning of refrigeration units, food handling equipment, and complex vending machines and for use in sanitizing, deodorizing and pest control operations. The unit weighs approximately fifty pounds, is thermostatically controlled, and is said to combine low purchasing price with economy in operation. It is manufactured in accordance with the Miniature Boiler Code approved by the American Society of Mechanical Engineers.

Automatic Liquid Control

"**E**LECTRI-CONTACT" meter for automatic control of liquid volume is being offered by Buffalo Meter Co., Buffalo, N. Y. This

meter, set to the desired volume of liquid, will cut the supply automatically when the right quantity is delivered.

Anhydrous Metasilicate

GENERAL Chemical Co., New York, is suggesting its granular sodium metasilicate to industrial consumers in the detergent field. The product will pass through a 10 mesh screen and not over one percent will pass a 100 mesh screen. It comes packed in 100 pound bags and 100 pound and 400 pound drums.

Perl Filling Bulletin

Perl Machine Manufacturing Co., Brooklyn, N. Y., recently issued a four-page illustrated bulletin describing its straight line vacuum filling machines for handling free flowing, viscous, and foaming liquids. Accuracy of filling is ensured by a micrometer filling height regulator. All sizes of bottles, jars, cans, etc. up to one gallon capacity can be filled by the Perl machines at speeds averaging 50 to 200 bottles per minute, depending upon bottle size and consistency of liquid. Overflow during actual filling is said to be eliminated.

The brochure shows the most recent addition to the line, a unit capable of filling 24 pint cans packed in one carton or 24 quart cans packed in two cartons with one stroke at a rate of 400 cans per minute. The machines are available with "Teflon" valves.

Blockson Has New Catalog

A new edition of its pocket size catalog was issued recently by Blockson Chemical Co., Joliet, Ill. Formulas, properties, and uses are included for the firm's proprietary "Teox" surface active compounds, for its phosphates, fluorides, and other basic chemicals. Selection of a suitable sodium polyphosphate for each individual need is facilitated by the revised section on classification of sodium polyphosphates. Basic information on water softening and water fluoridation is supplied.

Liquid Chlorine Booklet

Solvay Process Division, Allied Chemical & Dye Corp., New York, recently published the third edition of service bulletin 12, entitled "*The Analysis of Liquid Chlorine and Bleach*." New reagents, indicators, and standard solutions have been added to the pertinent section and supplemental methods for determination of metallic impurities and revised methods of tests applied in the analysis of chlorine and hypochlorite bleaches are included. The publication comprises 72 pages of text, tables, charts, and indices and is available from Solvay's advertising and sales promotion department.

H & D Multiple Pack

A multiple pack for the shipment of cans and packaged goods in large quantities subject to subsequent small-quantity distribution was introduced recently by Hinde & Dauch, Sandusky, O. The interlock box consists of two or more individual boxes joined by interlocking arms. A core sealer is used to glue the extending arms joining the sections. When the sections are cut apart in case-breaking operations completely sealed individual units result. Convenience and economy in handling and warehousing costs are claimed for this device.

Bulletin on Morpholine

A bulletin describing morpholine, its physical and chemical properties, uses and potential applications, was issued recently by Jefferson Chemical Co., New York. Morpholine is a colorless, hygroscopic liquid with an amine like odor and is derived from hydrocarbons. The product and its derivatives find applications in emulsifiers; gelling, wetting, and softening agents; insecticides, fungicides, herbicides, bactericides; corrosion inhibitors, antioxidants, etc. Included in the brochure are 221 bibliographical references. The publication is available by writing the company at 260 Madison Ave., New York 16, N. Y.

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Trade Marks

(From Page 71)

lington, Mass. Claims use since March 30, 1953.

Diaper Sweet—This for laundry cleaning and deodorizing compounds. Filed August 3, 1953 by Bu-Tay Products, Ltd., Los Angeles. Claims use since June 25, 1953.

Lanfoam—This for shampoo. Filed Sept. 11, 1953 by Hair-Kare Co., Chicago. Claims use since Aug. 7, 1952.

R-x—This for stain remover. Filed Nov. 7, 1952 by Caled Products Co., Cottage City, Brentwood, Md. Claims use since Aug. 2, 1952.

Glentauck GT—This for liquid washing and bleaching compound. Filed March 16, 1953 by Glentauck Bleach Co., Glendale, N. Y. Claims use since on or about Feb. 24, 1953.

Griffin-ize—This for liquid auto wax. Filed April 3, 1952 by John J. Griffin, doing business as John J. Griffin Co., Philadelphia. Claims use since Feb. 16, 1952.

Sta-Crome—This for metal polish. Filed Dec. 8, 1952 by Nathan Smith, doing business as Smith Laboratories, Inc., Flushing, N. Y. Claims use since Sept. 15, 1952.

fulltred—This for floor wax. Filed May 19, 1953 by Fuller Brush Co., Hartford, Conn. Claims use since on or about June 24, 1952.

Wax-Seal—This for auto polish. Filed Oct. 1, 1953 by Karseal Corp., Hollywood, Calif. Claims use since Sept. 13, 1946.

Skeeto-Go—This for insect repellent. Filed March 27, 1953 by Ivo, Inc., West Bend, Wis. Claims use since Sept. 1, 1952.

Tropical Breeze—This for household deodorant spray. Filed March 20, 1953 by Ralph E. Longmore, doing business as Royal Spray, Dedham, Mass. Claims use since March 1, 1947.

Pexchlor—This for disinfectant. Filed Nov. 9, 1953 by Peck's Products Co., St. Louis, Mo. Claims use since 1948.

PexoPine—This for disinfectant. Filed Nov. 9, 1953 by Peck's Products Co., St. Louis, Mo. Claims use since 1940.

Scent-a-Room—This for room deodorants. Filed Nov. 23, 1953 by Corona Mills, Lowell, Mass. Claims use since Sept. 15, 1953.

Nildew—This for fungicides. Filed Nov. 23, 1953 by Naftone, Inc., New York. Claims use since Nov. 20, 1952.

Shield—This for dentifrice. Filed November 2, 1953 by Lever Brothers Co., New York. Claims use since Oct. 6, 1953.

Siladerm—This for skin protective cream. Filed Nov. 23, 1953 by Silicote Corp., Oshkosh, Wis. Claims use since Sept. 25, 1953.

fulltrol—This for liquid detergent-disinfectant. Filed May 19, 1953 by Fuller Brush Co., Hartford, Conn. Claims use since on or about Jan. 2, 1953.

Pendit—This for liquid synthetic detergent. Filed July 13, 1953 by Raymond Laboratories, Inc., St. Paul, Minn. Claims use since Sept. 4, 1952.

Waxene—This for paste wax auto polish. Filed Feb. 12, 1953 by Karseal Corp., Hollywood, Calif. Claims use since Jan. 20, 1953.

bambu—This for auto wax polish. Filed March 25, 1953 by United States Products Co., Milwaukee. Claims use since on or about June 15, 1940.

Blair—This for household disinfectant. Filed Sept. 29, 1953 by Morton Mfg. Corp., doing business as Blair of Virginia, Lynchburg, Va. Claims use since 1944.

Falcon—This for insecticides, disinfectants, deodorizers, etc. Filed Oct. 5, 1953 by Eagle Soap Corp., Huntington, Ind. Claims use since Dec. 1, 1929.

Vaccinol—This for wood preservative. Filed October 8, 1953 by Vaccinol Products Corp., Memphis, Tenn. Claims use since 1933.

PCNB—This for fungicide. Filed Dec. 1, 1953 by Mathieson Chemical Corp., Baltimore. Claims use since Aug. 18, 1953.

Diprite—This for fungicide. Filed Dec. 1, 1953 by R. T. Vanderbilt Co., New York. Claims use since Nov. 18, 1953.

Trepolate—This for alkyl aryl sulfonates. Filed Dec. 7, 1953 by Trepow Products, Inc., Paterson, N. J. Claims use since June 5, 1948.

Swift—This for shaving cream. Filed May 29, 1952 by Old Empire Manufacturing Chemists, Inc., Newark, N. J. Claims use since Dec. 15, 1951.

Lanolair—This for shaving cream. Filed April 30, 1953 by Lenthier, Inc., New York. Claims use since April 14, 1953.

Kontrol—This for toothpaste. Filed November 3, 1953 by Mark Allen Co., Detroit. Claims use since Dec. 13, 1938.

Mad Mist—This for cleaning fluid. Filed March 13, 1953 by M. A. D. Products, Inc., Ramsey, N. J. Claims use since March 2, 1953.

Ameroid—This for degreasing composition for automobiles. Filed May 29, 1953 by E. F. Drew & Co., Inc., New York. Claims use since Jan. 2, 1930.

Hil-Sweep—This for liquid detergent. Filed July 9, 1953 by Hilliard Chemical Co., St. Joseph, Mo. Claims use since June 1, 1953.

nylaun—This for soap flakes. Filed Nov. 2, 1953 by Manhattan Soap Co., New York. Claims use since Oct. 19, 1953.

No-Vac—This for auto upholstery detergent. Filed Nov. 10, 1953 by Merlyn E. Cason, doing business as No-Vac Manufacturing Co., Des Moines. Claims use since Oct. 12, 1953.

Dia-Lyn—This for polishes. Filed Sept. 8, 1953 by Clifford R. Carney, doing business under the name of Dia-Lyn Sales Co., Seattle. Claims use since July 15, 1953.

Swami—This for chemically impregnated cleaning and polishing cloth. Filed Nov. 23, 1953 by Mill River Automotive Products Corp., Great Neck, N.Y. Claims use since Oct. 27, 1953.

Tapeaway—This for adhesive remover. Filed Sept. 8, 1953 by A. S. Aloe Co., St. Louis, Mo. Claims use since August 17, 1953.

X-E-Kute—This for insecticide.

Filed Nov. 30, 1953 by Thomas Y. Gibson, doing business as Gibson Pest Control Co., Macon, Ga. Claims use since March 10, 1953.

Malacide—This for liquid fly killer. Filed Dec. 10, 1953 by Woodbury Chemical Co., St. Joseph, Mo. Claims use since on or about April 15, 1953.

Blast Bait—This for rodenticide. Filed Dec. 14, 1953 by Robert S. Adams, doing business as Adams Agricultural Chemical Co., Minneapolis. Claims use since Aug. 28, 1953.

Bogey—This for pesticide, insecticide, fungicide. Filed Dec. 14, 1953 by Monsanto Chemical Co., St. Louis, Mo. Claims use since Dec. 8, 1953.

Lady's Choice—This for liquid laundry starch. Filed Dec. 21, 1953 by Lady's Choice Foods, Los Angeles. Claims use since Nov. 15, 1948.

So-Soft—This for laundry rinsing compound. Filed Dec. 23, 1953 by Sweet Clean Products Co., Euclid, O. Claims use since June 1, 1953.

Rat-Erase—This for rodenticide. Filed Jan. 5, 1954 by Burrell-Dugger Co., Indianapolis, Ind. Claims use since Dec. 7, 1953.

Larvabrome—This for industrial fumigants. Filed Jan. 15, 1954 by Larvacide Products, Inc., New York. Claims use since on or about Aug. 27, 1951.

Amcid—This for insecticide. Filed Jan. 18, 1954 by McLaughlin Gormley King Co., Minneapolis. Claims use since Nov. 13, 1953.

Strogum—This for Japan wax. Filed Jan. 19, 1954 by Strohmeyer & Arpe Co., New York. Claims use since Dec. 16, 1953.

Lynn's—This for flea soap. Filed March 22, 1951 by S. Pfeiffer Mfg. Co., doing business as Lynn Chemical Co., St. Louis, Mo. Claims use since 1915.

Flurozyme, Antizyme—These for medicated toothpastes. Filed July 29, 1953 by Lambert Co., St. Louis, Mo. Claims use since July 16, 1953.

Lamb-O-Lin—This for shampoo. Filed April 6, 1953 by Nil-O-Mal, Inc., Chicago. Claims use since Jan. 10, 1952.

Shampoo Whip—This for shampoo. Filed Sept. 27, 1950 by Helene Curtis Industries, Inc., Chicago. Claims use since on or about July 26, 1950.

Atlas—This for auto windshield washer. Filed March 4, 1952 by Atlas Supply Co., Newark, N.J. Claims use since Jan. 23, 1952.

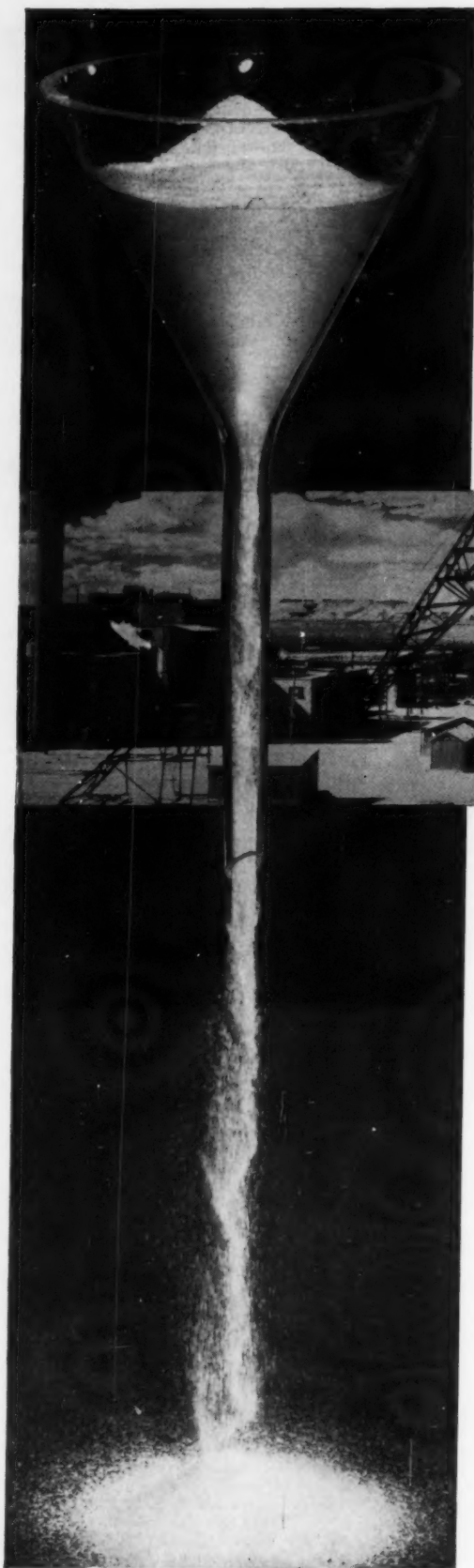
Ghost—This for waterless hand cleaner. Filed May 27, 1952 by Mildred M. Darrow, doing business as Ghost Manufacturing Co., Detroit. Claims use since April 26, 1952.

Snow Creme—This for shampoo. Filed Aug. 14, 1952 by Revlon Products Corp., New York. Claims use since May 17, 1950.

Prom—This for shampoo. Filed Jan. 2, 1953 by Northern Laboratories, Manitowoc, Wis., assignor to The Gillette Co., Boston. Claims use since Sept. 15, 1949.

Keep—This for bar soap and liquid detergent. Filed March 9, 1953 by Andrew Jergens Co., Cincinnati. Claims use since Feb. 2, 1953.

ZeefZone—This for stain remover. Filed Oct. 19, 1953 by Riverside Manufacturing Co., St. Louis, Mo. Claims use since Jan. 1, 1923.



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Products and PROCESSES

Bactericidal Detergent

Polymeric biguanides have been found efficient in the sterilizing of food handling equipment and particularly suitable for cleansing and sterilizing beer handling equipment, by reason of their negligible effect on beer head retention. An aqueous solution is used which contains one or more polymeric substances which, in the form of their free bases, are linear polymers, such as polymeric hexamethylene biguanide hydrochloride. Such polymeric substances can be mixed with surface active agents of the cationic or nonionic type. British patents 703242 and 703256, 1954, I.C.I., London, England.

Non-allergenic Cleaner

A liquid washing agent said to contain pure natural oils and a disinfectant is being marketed in bottles by a new German firm. Described as foam of sour oil (*Sauer-oelschaum*) the novel preparation is said to combine disinfectant, deodorizing, and detergent properties. It is claimed to be completely non-irritating and is recommended for use on hypersensitive or even damaged skin. Suggested for use as a shampoo, the product is said to prevent scalp damage by permanent waving solutions and to prevent the formation of dandruff. In addition to the bottled version the product is also put up in small transparent plastic bags, each containing enough for one thorough cleansing of the hands. *Aetherische Oele, Riechstoffe, Parfumerien*, etc. November 1953, page 254.

Syndet Pilot Plant

A pilot plant for synthetic detergents was introduced recently by Pfaudler Co., Rochester, N. Y. The unit was originally developed for export to Iceland. The entire assembly is said to cost less than \$8000 and can be handled by one

unskilled operator. A stainless steel sulfonator-neutralizer, a glassed-steel settling tank with stainless steel heat exchanger pump, and necessary control instruments constitute the whole plant.

New Chlorination Process

Chlorine in the sterilization of water, methods of application, and a new chlorination process, are described in a paper by Raoul Bury, Centre belge etude et document, eaux, Bull.mens. No. 41, 11-15- (1954). Water chlorination in general is reviewed. A new Swedish process "Mibis" for the purification of swimming pool water is described in detail. This involves dosage of Cl_2 2-4 p.p.m. beyond the breakpoint to insure sterilization of all bacteria, followed by filtration through a porous mass of calcined dolomite to neutralize free Cl_2 and to raise the pH to 10. Through *Chem. Abstracts*, vol. 48, p. 6623.

Viscous Toxaphene

Insecticides containing toxaphene are made in the form of a dispersion in an aqueous medium with the addition of a thickening agent to obtain the desired viscosity. British patent 702,952, 1954, Murphy Chemical Co., St. Albans, England.

Foam Stabilizers

The foam of anionic synthetic detergents of the secondary C_8 - C_{18} sodium alkyl sulfate type is stabilized by the addition of two to 30 percent of one or more of the higher 1,2-alkanediols (with 10 to 18 carbon atoms). The latter are prepared by the hydroxylation of olefins with a double bond at the end of the chain with H_2O_2 . The olefins are technical fractions from the cracking distillation of paraffins. The stabilizing effect is optimal with ester salts containing at least 40 percent of secondary sulfates.

The usual additions, such as soap and other surface-active agents, may be present. The foam of primary alkyl sulfates and of fatty acid soaps can be similarly stabilized. Dutch patent 73,501, 1953, N. V. Bataafsche Petroleum Maatschappij.

DDT's Effect on Lice

Chlorinated hydrocarbons such as DDT, BHC, and metacide cause pronounced toxic degeneration of blood cells of the louse. The nuclei degenerate and show caryorrhexis. Many details on the histological changes are given in paper on tissue degeneration in *Pediculus vestimenti* after treatment with hydrocarbons by Heinz Luedtke and Hans Hopp, University of Freiburg, Germany, *Naturwissenschaften* 40, 346-7 (1953), through *Chem. Abstracts*, vol. 48, page 6640.

Disposable Dispenser

A new dispenser for soap, detergents, and other liquid substances features as receptable the renewable or discardable container, in which the substance to be dispensed is normally marketed. The container is detachably mounted to the dispensing apparatus and, if desired, it may be locked to it. British patent 703,012, 1954, H. W. S. Churchill, Warmwell, Dorchester, England.

Chemical Encyclopedia

Encyclopedia of Chemical Technology, volume 12, edited by Raymond E. Kirk, head, department of chemistry, and Donald F. Othmer, head, department of chemical engineering, Polytechnic Institute of Brooklyn, published by Interscience Encyclopedia, Inc., New York, 1954, cloth covered, 7½ by 10½ inches, 955 pages, subscription price \$25.00, single copy \$30.00. Comprising listings from "Sabadine to Stilbestrol" this latest volume includes monographs on "Soap" by G. W. Busby, Lever Brothers Co.; on "Shampoos" and

(Turn to Page 94)

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Will operate efficiently
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* Patent Pending

NEW Patents

The information below is furnished by patent law offices of

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Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. \$1.00 for Canada. They will be pleased to give you free preliminary patent advice.

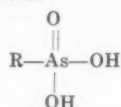
No. 2,677,655. Manufacture of Soap Bars or Tablets, patented by Frederick Oliver James, West Kirby, England, assignor to Lever Brothers Co., New York. A method of forming a hard, solid, filled soap product is described, which includes the successive steps of adding about 3 to 40 parts by weight of 80° Tw. neutral sodium silicate and about 1 to 10 parts of 40% aqueous sodium aluminate to about 50 to 96 parts of hot molten soap to form sodium aluminum silicate gel in situ within the hot molten soap, chilling the molten filled soap, and plodding the resultant solidified filled soap.

No. 2,677,913. Soap Cake With Figured Core, patented by Sophia Swartz, New York, N. Y. The patent covers a cake of non-floating soap with a figured doll core of sufficient buoyancy to make the combination float in water, said doll core having its torso completely embedded in the soap with protruding head and having protruding feet constructed to support the soap and toy in an upright position when rested thereon and thereby avoiding sliming in the drying.

No. 2,678,302. Antiseptic Detergent Composition, patented by David J. Beaver, Richmond Heights, Paul J. Stoffel, Florissant, and Roland S. Shumard, Brentwood, Mo., assignors to Monsanto Chemical Co., St. Louis, Mo. An antiseptic detergent composition is covered which comprises a detergent soap and a minor weight proportion with respect to the detergent sufficient to impart antiseptic properties of 4,4'-(p-hydroxy benzylidene)-bis-(3-methyl-6-tert. butyl phenol).

No. 2,678,265. Weed Control, patented by Arthur Schwerdle, Vineland, N. J., assignor to Vineland Chemical Co., Vineland, N. J. A method of selectively controlling the

growth of crabgrass is disclosed, which comprises applying to an area containing crabgrass a composition comprising a mixture of at least one arsenic compound selected from the group consisting of arsenic acids having the formula:



where R is an aliphatic group selected from the group consisting of methyl, ethyl, propyl, allyl and butyl, and salts thereof; and an inert diluent therefor, in a concentration and amount sufficient to destroy crabgrasses but insufficient to destroy material quantities of the useful grasses and plants.

No. 2,678,303. Water Treating and Cleaning Composition, patented by Paul W. Bonewitz and Elmer H. Fuels, Burlington, and Sebern W. Hockett, Mount Pleasant, Iowa. The patent refers to a water soluble, water treating and cleaning composition consisting essentially of caustic alkali selected from the group consisting of sodium hydroxide and potassium hydroxide and dextrin in amounts to sequester hard water salts and prevent precipitation thereof whereby the cleaning action of the caustic is not interfered with, the ratio of the caustic to the dextrin being between about 50 to 99.5 parts caustic to between about 0.5 to 50 parts dextrin, by weight on a dry basis.

No. 2,678,902. Hand Lotion, patented by Robert James Mehaffey, River Edge, N. J., assignor to Colgate-Palmolive Co., Jersey City, N. J. The patent covers a hand lotion comprising an oil-in-water emulsion, and from about 0.5% to about 2.0% of colloidal magnesium aluminum silicate gel and from about 0.1% to about 1.2% of sodium carboxymethylcellulose.

No. 2,678,921. Process of Producing a Milled Non-Soap Detergent in Bar Form, patented by Joseph A. V. Turck, Jr., Glen Rock, N. J., assignor to Colgate-Palmolive Co., Jersey City, N. J. The patent discloses a process of producing a milled non-soap detergent in bar form consisting essentially of detergent material and a plasticizer, said detergent material being a water-soluble salt of an organic sulfuric reaction product having in its molecular structure a radical selected from the group consisting of sulfonic and sulfuric acid ester radicals and said plasticizer being a normally solid ether-alcohol

fatty acid ester which dissolves slowly in water, the steps which comprise drying the detergent material to a moisture content of not more than 5% by weight, incorporating up to 20% by weight of said plasticizer, heating the resulting mass to a temperature between 110° and 170° F. to render the same plastic and workable but insufficient to cause liquefaction of the same, and subjecting said mass while thus heated to a plodding treatment to form a compacted, firm, cohesive detergent body.

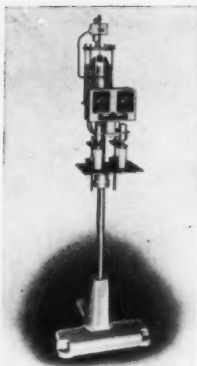
No. 2,679,482. Synthetic Detergent Compositions, patented by John Ross, Ramsey, N. J., assignor to Colgate-Palmolive Co. Jersey City, N. J. A detergent composition is covered which consists essentially of detergent selected from the group consisting of water-soluble organic sulfate and sulfonate detergents, and a minor proportion of a compound selected from the group consisting of 1,2 and 2,3 higher saturated aliphatic glycols having a straight-chain of about 10 to about 20 carbon atoms in an amount from about 1 to about 10% by weight of the detergent composition.

No. 2,678,937. Destearinization of Glyceride Oils, patented by Elmer W. Brennan, Carpentersville, Paul R. Chapman, Lake Zurich, and George Wolfram, Union, Ill., assignors to The Pure Oil Co., Chicago. The patent refers to a process for improving the low temperature characteristics of a fatty oil containing high melting point esters of saturated fatty acids. The steps comprise dissolving said fatty oil in a selective solvent for the desired constituents of the oil, initially chilling the resultant fatty oil solution to a temperature not below about +5° F. at which a substantial proportion of the high melting point saturated fatty acid esters will crystallize and precipitate out of solution, maintaining said solution at this temperature for a time sufficient to precipitate out of solution a substantial proportion of said high melting point saturated fatty acid esters, further cooling the resulting mixture to a temperature not less than about 15° cooler than the initial chilling temperature, maintaining the said mixture at this temperature for a time sufficient to crystallize and precipitate out of the remaining solution additional amounts of the high melting point saturated fatty acid esters, separating solids and liquids and evaporating the solvent from the resulting liquid to recover a fatty oil material having a substantially decreased A. S. T. M. pour point.

No. 2,678,936. Method of Refining Vegetable and Animal Oils, patented by (Turn to Page 94)

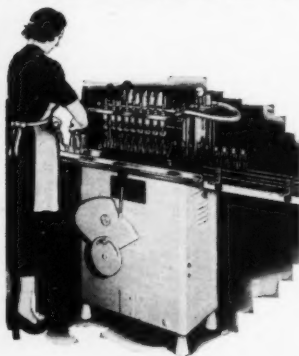
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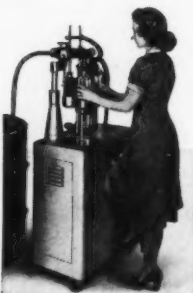


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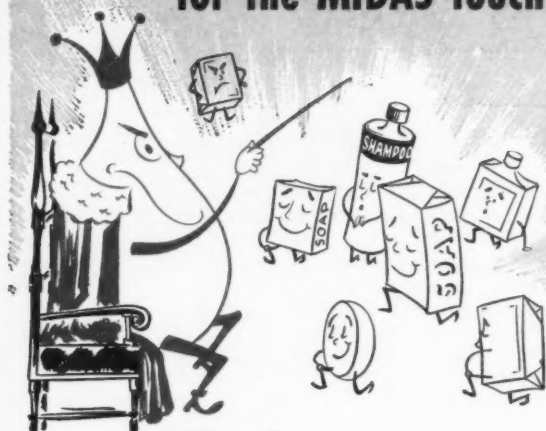
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SOAP and CHEMICAL SPECIALTIES

SOAP PLANT *Observer*

By John W. McCutcheon

INFRA-RED spectroscopy has reached a high point in the analysis of synthetic detergent materials. Soaps are not too easy to analyze, particularly if the analysis is to include an interpretation on just how and in what proportions the original ingredients were put together. Since synthetics are more varied in composition and more difficult to "take apart," it is easy to see just how complicated the process can become.

The analytical equipment most commonly used is a double beam recording spectrophotometer which sells for about \$15,000. The double beam enables one to suppress the background pattern caused by the presence of solvent, etc. The general wave length used is from two to 15 microns and the pattern formed is a "fingerprint" of the compound or mixture of compounds present.

An example of such a "fingerprint" for a polyoxyethylene alkyl phenol such as a "Triton X-100," "Igepal CA," etc., is given in Figure 1. Samuel P. Sadtler & Son, Inc., Philadelphia, furnish the infra-red spectrogram. The peaks of the curve represent specific characteristics: the greater the drop of the curve, the greater the con-



centration. The point at wave length 3.5, for example, is that for an alcohol—in this case the phenol group. A corresponding drop would be shown for a fatty alcohol, so that some degree of skill is required in the interpretation of the curve as a whole. Generally, such interpretation involves comparisons with a large number of other "fingerprints."

In one set of analyses involving fatty esters having the same alcohol group, it was noted that extreme similarity existed between the curves except for the peak at wave length 10.5. This whole portion of the curve became

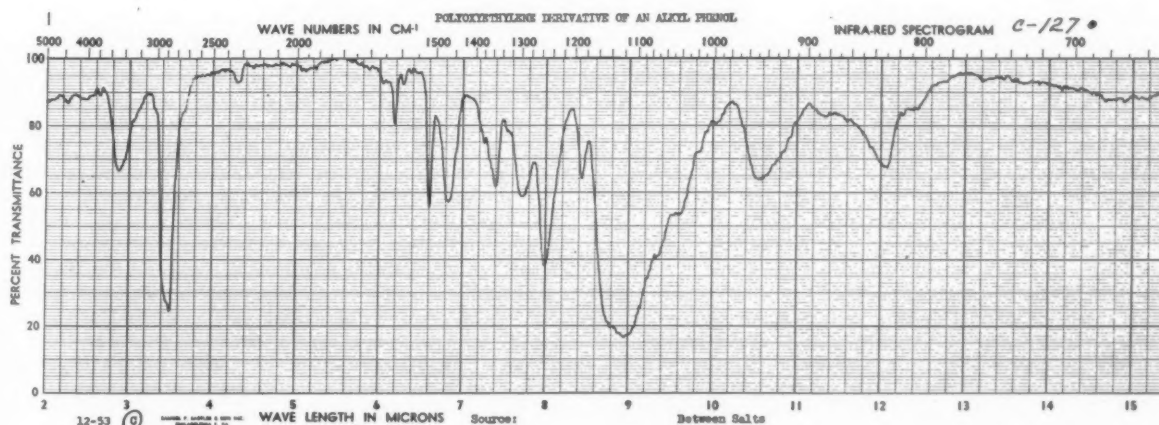
lower and lower as one progressed from stearic acid through lauric. By comparing such a series of spectrograms, therefore, it would not be difficult to determine rather quickly what chain length acids were used in esters of the same alcohol group. Mixed products give superimposed curves so that it is expedient to do some analytical separations and make graphs on each portion. Best results are obtained when chemical and physical methods are combined.

The Sadtler company has prepared about 250 spectrograms on trade name American products and offers them for sale at \$150 per set. This is a useful piece of work in one respect. These spectrograms will, at once, identify a product and indicate whether it has been diluted and resold. It would not be so useful for determining the absolute composition of a pure compound. For example, no spectrograms are available commercially analyzing pure dodecyl benzene sodium sulfate, lauryl alcohol sodium sulfate, or isooctyl phenol with 10 moles of ethylene oxide. In the writer's opinion this is more fundamental and would take a lot of the mumbo jumbo out of the interpretations.

* * *

THE useful purpose that physical methods of analysis serve has been mentioned in this space before. The writer has repeatedly seen equipment of this nature in many laboratories, including X-ray

Figure 1



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spectrograms. At the recent conference on spectroscopy held in New York, May 27 and 28, the writer discussed the relative values of these pieces of equipment with respect to the detergent industry. Apparently, first place goes to the infra-red spectrophotometer as mentioned above. Then comes the X-ray equipment. It is particularly useful for inorganics and can differentiate between the various types and forms of the phosphate salts for example.

Ultra violet spectrophotometers have their greatest potential in the analysis of the aromatics and therefore would be more serviceable for research than routine control.

The small soap or detergent manufacturer finds himself increasingly handicapped in trying to keep up with the research efforts of his larger competitors. Not only is the burden of the large capital cost extremely heavy, but the space and technical personnel required to conduct the research are beyond the means of all but a few. Recourse in such cases must be made to commercial research and consulting services who have such equipment available. What the small

soaper must realize is that his staff should be thoroughly conversant with newer methods so that they can understand and appreciate more advanced outside research work. In addition, the small soaper should realize that the expense involved in obtaining this type of information has mounted. Results of this research should be reported in as simple terms as possible for the smaller company to understand their significance. Fifteen or twenty years ago when soap, sodium silicate, trisodium phosphate and soda ash were the prime ingredients of a detergent composition an analysis would run perhaps \$25 to \$50. Now, because of the more complex nature of the products, and the increased amount of labor and equipment involved, the analyses often run 11 to 20 times older figures.

AN English-Spanish vocabulary for the soap and synthetic detergent industry, published by E. T. Boehme, Havana, Cuba, was received here recently. The work is a small 20-page book of mimeographed sheets.

The efforts of someone to aid in bringing about a better understanding between the English

and Spanish speaking members of the soap and detergent industry are commendable. This is particularly significant in view of the increasing technical progress of the Latin American countries. To further this progress a number of manufacturers of detergents in Latin America are sending their sons to the United States for the undergraduate and postgraduate studies in American universities and colleges. The young men who are being technically educated in this country will eventually return to their native lands and become executives in their fathers' businesses. This trend will accelerate technical growth and development in Latin America, and will also bring about the need for a greater degree of familiarity with the English and Spanish languages.

Brazil, for example, although not a Spanish speaking country, has increased its industrial activity tremendously in the past 20 years. The Government of Brazil is trying to encourage this trend, and has taken steps to do so by means of a complicated exchange control system. The system is based on a classification of raw materials according to their usefulness, local availability and potential availability. Brazil has a system of control of its national resources, including monetary assets and raw materials. The government does not permit the export of raw materials that are required for the country's domestic economy. Two of Brazil's largest cities, Rio de Janeiro and Sao Paulo, have a combined population of over five million people. Plants for the production of synthetic detergents are just now getting under way. These rely heavily on American and German technological assistance.

—★—

Redesigns Small Packager

Redesign of its Model A, small packager filling machine, was announced recently by Packer Machinery Corp., New York. According to the company, it was found that small packagers prefer a drill press type handle, but unlike a drill



Newly redesigned Model A small packager filling machine of Packer Machinery Corp., New York, with drill press type handle that locks into position. Motor, pump and filter are within the body of the machine and out of sight.

press, one that locks into position during the filling cycle. Such a handle has been installed on Packer's Model A small packager. The unit has also been redesigned so that the motor, pump and filter have been installed within the body of the machine and are out of sight. The new model is also equipped with standard, interchangeable, stainless steel spout assemblies, such as are found on the larger Packer fillers.

Model A now comes in a vacuum model, equipped with three to six spouts; a gravity type model, equipped with three spouts, and both have clear plastic tubing and are fully adjustable for handling of containers which range in size from ounces to quarts.

Pullman Vacuum Data

Pullman Vacuum Cleaner Corp., Boston, recently issued a catalog sheet describing its commercial portable vacuum cleaner "Model JB-90" and its application.

Cosmetic Handbook

Handbook of Cosmetic Materials by Leon A. Greenberg and David Lester, with a chapter on *The Skin* by Howard W. Haggard. Published by Interscience Publishers, New York, nine by six inches, paper covered, 455 pages, price \$12.50.

This volume is based on a collaborative effort of the cosmetic industry, initiated by the Toilet Goods Association, and on bibliographic research by the staff of the Laboratory of Applied Physiology, Yale University. The main body of the book consists of an alphabetically arranged list of approximately 1000 materials selected from the industry's response to a questionnaire sent out by the association. Each listing gives formula and collateral names of the compound, its properties and uses, toxic and dermatologic action. The list includes ample cross references. The information supplied on each material is extensively documented by a bibliography including more than 2700 literature references. These

were compiled and screened by the staff of the Bibliographic Reviews project at the Yale University Laboratory of Applied Physiology. Preceding these two sections of the work is a chapter on the skin by Dr. Haggard which forms a background for the understanding of properties and actions of cosmetic materials, dealt with in this volume.

"G-11" Soap in S. Africa

The Chemical Division of S.A. Commercial House (Pty.) Ltd., Union of South Africa, recently started to use hexachlorophene in its liquid soaps for germicidal, surgical, and deodorant purposes. The firm has also developed a hexachlorophene soap in gel form for use by the natives employed in the gold mines in the Union of South Africa. This gel is dispensed by a steel pump, designed to yield a dosage of two cc of the product. It is hoped that the germicidal soaps will reduce the incidence of industrial dermatitis.

Encyclopedia

(From Page 87)

other hair products by Florence E. Wall, consulting chemist; on "Sequestering Agents" by Martin Knell and Harry Kroll, Alrose Chemical Co.; on "Silicones" by R. R. McGregor, Mellon Institute of Industrial Research; on "Soluble Silicates and Synthetic Insoluble Silicates" by J. H. Willis, Philadelphia Quartz Co.; and on such universally important subjects as solvents and solvent recovery, sterilization, safety, and size measurement of particles. Each of the monographs is followed by an extensive bibliography. Pictures, sketches, graphs, flow sheets, and tables are included.

Patents

(From Page 89)

ented by Ivar Axel Afzelius, Bromma, and Hans Olof Lindgren, Smedslatten, Sweden, assignors to Aktiebolaget Separator, Stockholm, Sweden. The patent covers a method of continuously refining fatty oils in two stages with lye as a neutralizing

and decoloring agent in both stages. This comprises, in the first stage, mixing strong lye rapidly with the oil in the form of fine drops but in insufficient quantity to neutralize completely all of the fatty acids and acid soaps in the oil, thereby neutralizing a substantial part of the free fatty acids in the oil, the partial neutralizing being completed while flowing the mixture under conditions of mild turbulence, centrifuging the mixture in a centrifugal chamber to free the oil from soap and acid soaps, and, in the second stage, mixing the remaining oil from the first stage with a further quantity of strong lye to neutralize residual fatty acids and acid soaps and precipitate pigment and slimy matter, and recentrifuging said remaining oil to separate the resulting soap, pigment and slimy matter therefrom.

No. 2,678,325. **Alkali-Refining of Fatty Glycerides in the Presence of a Tartaric Compound**, patented by John A. Carlson, Old Tappan, N. J., assignor to Lever Brothers Co., Cambridge, Mass. The processes of alkali-refining a degummed fatty glyceride stock are covered by treatment with aqueous alkali and alkali-refining non-degummed fatty glyceride stocks by treatment with aqueous alkali in which at the same time the gums are decomposed by the alkali and dissolved therein, and separating an aqueous phase containing gum residues, if any, and undesirable impurities from a refined oil phase, the improvement of which comprises introducing at any stage in the alkali-refining step a small amount up to about 0.75% of a tartaric acid on an anhydrous weight basis relative to the amount of oil treated to reduce the refining losses.

No. 2,678,878. **Plant Growth Regulants Containing Aryl and Haloaryl Sulfonic and Thiosulfonic Acids**, patented by William D. Stewart, Brecksville, Ohio, assignor to The B. F. Goodrich Co., New York. A plant growth regulant composition is described which comprises as the essential active ingredient 0.01% to 10% by weight of a halophenyl ester of halobenzene sulfonic acid uniformly dispersed in an aqueous solution containing 0.01% to 1.0% by weight of a wetting and dispersing agent.

No. 2,678,901. **Fadeproof Brilliantine**, patented by Arthur Lawrence Fox, Short Hills, and Albin Fritjof Anderson, Allendale, N. J., assignors to Colgate-Palmolive Co., Jersey City, N. J. The patent covers a brilliantine composition including a major proportion of an oil; a light-sensitive dye to impart a desired color to said composition, and a minor proportion, up to 1% by weight and sufficient to inhibit the fading of the color imparted to the brilliantine by said dye, of benzoyl resorcinol.

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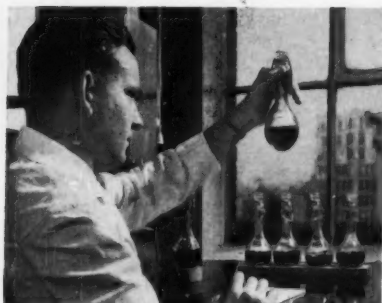
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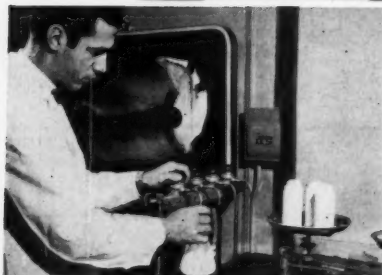


NEWS



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In the popular and rapidly expanding aerosol industry, there naturally occur many "growing pains." While these are simply a sign of and attendant upon all growth, they must be carefully ironed out well in advance of actual product marketing, and for best results such work must be done on an individual basis. An amazingly vast and ever increasing number of products are now being marketed in aerosol form, and with each item requiring a perfume ingredient the problems of solubility, leakage, corrosion, compatibility, shelf life, etc. must be worked out by the aerosol chemist. In order to encompass this entire operation in a minimum of time with maximum results, all equipment is custom made. D&O has constructed another new laboratory, completely equipped for the filling and testing of aerosol packages.

Two Filling Systems Used

Both an Aerosol Pressure Filling System, which is of an experimental capacity and not designed for production, and a Cold Filling System have been installed. In aerosol packaging the Pressure Filling System is best suited for foam products, such as shave creams, shampoos, hand lotions, etc., while the Cold System produces better results in such items as insecticides, room deodorants, colognes, hair lacquers and antiperspirants. A special water bath for testing finished cans for leakage after sealing has also been installed, and maintains a temperature of 130°. Cans that pass the water test are then placed in a Corrosion Box, a specially built cabinet capable of maintaining a desired uniform temperature over a pre-determined period of time. This step is designed to test the compatibility of the finished aerosol product with can components . . . walls, nozzle, etc., and determine, if any, the amount of corrosion or clogging. For example, a can placed in the Corrosion Box for one month at a constant temperature of 140° is equivalent to a year's shelf life. After removal cans are cut apart and examined minutely for evidence of incompatibility. Finished aerosol products, that have successfully passed all required tests will be forwarded to the manufacturer in either a 6 or 12 oz. can, with specially designed D&O label.



Filled cans are crimped or sealed with special capping machine. Type of valve used is determined by product to be packaged.

The water bath, which is maintained at a temperature of 130°, shows up any possible leakage after capping.



All cans that have passed the water bath test are then placed in the Corrosion Box for checking compatibility of contents with can, during actual shelf life of the product.



Aerosol products that have passed all tests are finally checked for stability of ingredients.

ATTENTION

Manufacturers Non-Rubbing Floor Polishes!



**Refined (Dewaxed) Bleached White Shellac is
Synonymous with Quality and Uniformity!
Its Low Acid Number Requires a minimum of Alkali
Dissolves Rapidly and Completely.**

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Durability	Stability
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HOW glass aerosol CAN BOOST THE sales appeal OF your products



Package for spray-dispensing... and do it in glass. This combination gets results!

Push-button containers invite immediate attention and examination... give both men and women shoppers cleanliness, protection, economy. Glass, of course, has always had universal sales appeal. Personal products, especially, like perfume, cologne, sun tan oil, hair dressings, deodorants, etc., sell faster when they're spray-dispensed in glass. Glass aerosols offer high content visibility, shelf promotion of product color, and an unlimited range of inexpensive bottle shapes and sizes... for flexible pricing in highly competitive trades. Capitalize on the trend to glass aerosols now. Boost profits. Contact Continental for a free product evaluation today.

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Frosted hour-glass bottle.



Clear "simplicity" bottle.



Wheaton plastic-coated bottle.



Wheaton clear oval bottle.

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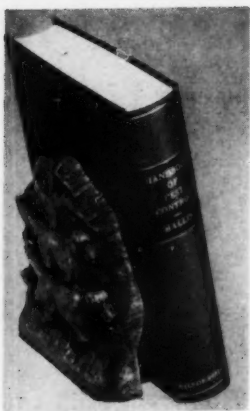
Save handling time and labor. Order the 50% concentrate of Roccal, the original ammonium quaternary germicide, in new 5 gallon polyethylene container. A simple "one-man" job to handle this new unit . . . measures but 11" x 11" x 11", weighs only 45 lbs. completely packed . . . yet practically indestructible.

Roccal is laboratory controlled and tested. In recommended dilutions is non-poisonous, non-irritating to skin, virtually odorless, tasteless. Roccal does a better sanitizing job.

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Now!

HANDBOOK OF PEST CONTROL

by Arnold Mallis

THE new HANDBOOK of PEST CONTROL by Arnold Mallis, a completely revised edition, is on the press and available for distribution.

▲ The new edition contains more than 200 illustrations—a much larger and more complete volume than the original HANDBOOK by Mallis, published in 1945 and out of print since 1948.

▲ This newest pest control reference volume deals primarily with household and industrial pests, insects, rodents, etc., their habits, identification, and latest methods of control. It is the most complete work of its kind ever offered in a single volume.

▲ Those who have used the original HANDBOOK by Mallis undoubtedly will want this new, up-to-date volume, a standard reference book which should be in the library of every pest control operator, insecticide manufacturer and marketer, entomologist, chemist and others interested in modern materials and methods of pest control.

▲ The new HANDBOOK of PEST CONTROL by Arnold Mallis measures six by nine inches, has a sturdy binding in green cloth, gold stamped. The book comprises twenty five chapters, running to a total of 1067 pages and is printed on durable, long-lasting paper.

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rats and mice
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and related beetles

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spiders
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ticks
miscellaneous household
pests and chemicals used
in their control

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SOAP and CHEMICAL SPECIALTIES



Did they pick her up from your customer's floor?

New CHECK-SLIP* floor care system combines safety, economy, non-glare beauty

Safety—Slipping on skiddy, waxy floors is a major cause of accidents in offices. These accidents are a headache to your customer and his insurance company—because they cost money and lower office morale and efficiency. *And they can cost you customers.*

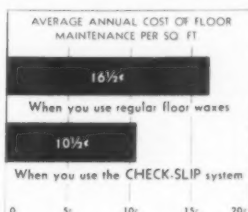
You can effectively help reduce this accident hazard by offering the new CHECK-SLIP floor care system. CHECK-SLIP is a waxless coating with all the beauty and durability of the old-type finish but with none of its slipperiness and waxiness. It's actually **LESS SLIPPERY THAN THE ORIGINAL TILE!**

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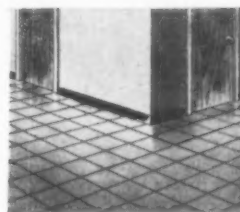
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Economy—Chart compares total average annual cost (product plus labor) of maintaining floors using CHECK-SLIP versus regular floor wax. CHECK-SLIP is faster, easier to apply . . . requires fewer applications.

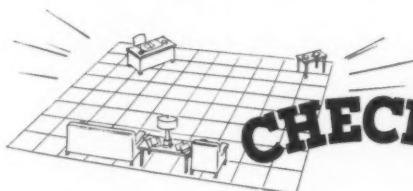
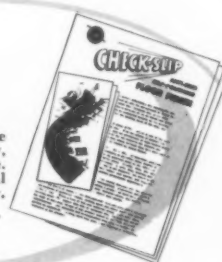
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Non-glare Beauty—CHECK-SLIP gives floors a pleasing, attractive luster in keeping with the trend away from efficiency-lowering, high-reflectivity finishes. Employees find it easy on the eyes, safe to walk on.

Find out today
How CHECK-SLIP
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This literature tells how to use 'Check-Slip' for greater safety, economy and beauty in office, building, store and industrial plants. Write for it today.



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SOLVAY ORTHOSOLV can be packaged and sold for the removal of heavy greases, tars and oils. It can be used for cleaning garage floors, de-greasing machinery, tools and metal parts. It is easily removed by flushing with water or steam-jennies. ORTHOSOLV's high flash point makes it a safe solvent.

As a Deodorant

This product can be repacked and sold as a cleaner and deodorizer of garbage and refuse containers. Orthosolv is an effective, efficient, economical agent for treating areas with objectionable odors. It can be used with any type of spraying equipment including aerosol containers.

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ORTHOSOLV can be marketed as an additive to fuel oil tanks. It dissolves heavy sludge. When used as a sludge solvent it can be cut back with kerosene.

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Position

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Undiluted...



HO reads SOAP & CHEMICAL SPECIALTIES? Obviously people who have an interest in soaps, cleansers, detergents, floor products, insecticides, deodorants, aerosols, and other chemical specialties. If they didn't have an interest in these products, — their manufacture, packaging, distribution and use, — it's a lead pipe cinch that they would not read this magazine. Because, every issue concerns itself with these things and these thing **only**.

If you want a general smattering of all sorts of chemical stuff from acetic acid through paint, putty, and zinc picrate, we would suggest looking elsewhere. But, if you want 70 to 80 pages of information in every issue on detergents, soaps, chemical specialties, **et al**, SOAP & CHEMICAL SPECIALTIES alone gives you this. No other publication gives this field anything

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Our entire production of several million pounds was completely sold out by March 1953.

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OUTSTANDING ADVANTAGES OF COLD-PRO 60 ARE:

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| Less than .1% ash | • | Less than 1% air-borne dust |
| Less heat and alkali required to dissolve it. | | |
| Cuts brilliantly | • | Longest stability |
| Highest Gloss | | |

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This is truly a unique product and we offer samples and technical data to those firms who are interested in periodic comparative raw material evaluation. Write for yours today.

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Cold-Pro 60 **BLEACHED
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• So widespread has been the public acceptance and demand for self-dispensing packages equipped with colorful Precision valves, that new type products and additional brands are added daily to the long list enjoying the plus values offered by Precision. To keep pace with this tremendous growth, Precision's production and research are continually expanding both here and abroad so that your package may have the merchandising and technical advantages of a Precision valve regardless of the product, container or filling method involved.

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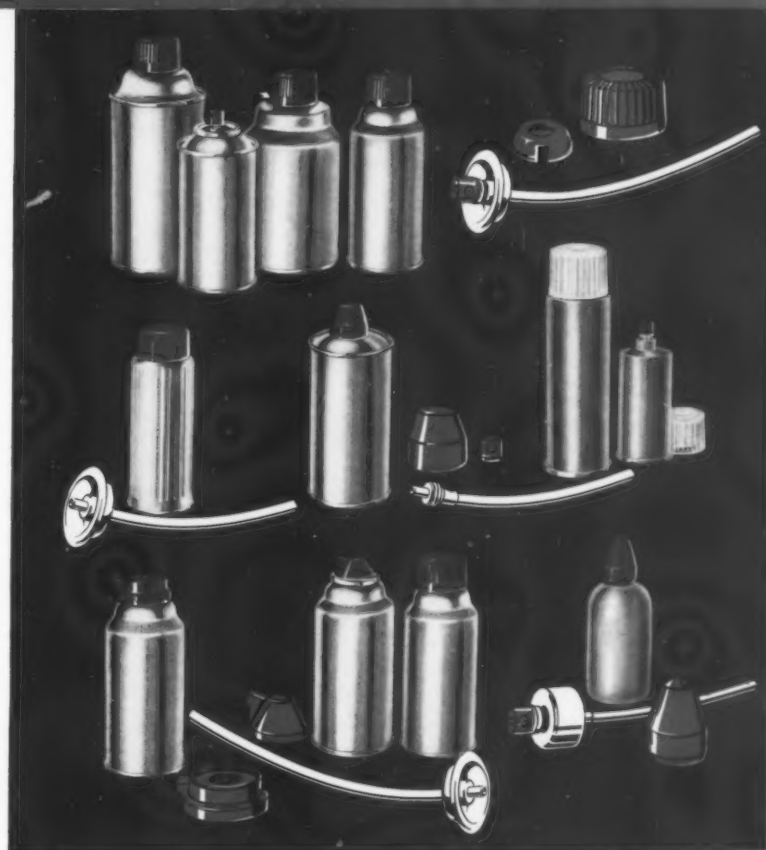
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...about chemical specialties

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by Milton A. Lesser

THIS 514-page text covers the formulation, manufacture, and use of polishes, cleansers, detergents, floor-care, leather-care, and textile products, industrial, household, and many other allied chemical specialties. Each of the 42 chapters deals with a different specialty and includes formulas and manufacturing methods for that specialty. The manufacturer, marketer, chemist and production man will find this book of great value.

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by Leonard Schwarz

A COMPLETELY revised 576 page book which includes: bacteria and disease, principles of disinfection, disinfectants (6 chapters), deodorants, man versus insects, household and industrial insecticides (9 chapters), rodenticides, floor waxes and floor care, sweeping compounds, potash soaps, detergents and cleansers (4 chapters), labeling and packaging, laws and regulations explained. A practical book on formulation, properties, testing, history and effective use . . . full coverage of labeling (with specimen), laws, regulations, etc. . . . for every executive, salesman, plant man and chemist . . . in plain understandable language . . . an entirely new book!



NOW!!! Our latest book — **Handbook of PEST CONTROL**, by Arnold Mallis, is now ready for distribution. The book contains approximately 1070 pages — 237 illustrations — 27 chapters — a completely revised and up-to-date edition of the original HANDBOOK published in 1945 and out of print for five years. The new book is 6" x 9", bound in hard cover—completely covers the field of household and industrial pests, insects, rodents, etc. — their habits identification and latest method of control. **ORDER NOW!!!**

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FAST-DRY

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THIS ACTUAL COMPARATIVE PHOTOGRAPH

demonstrates the difference! A conventional penetrating sealer has, as usual, darkened the left side of this wooden panel. The right side retains its light, natural color when sealed with **FEDERAL STAYLIGHT!**



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Formulated from newly developed raw materials that give greatly increased durability.

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Staylight penetrates evenly when applied to porous surfaces, eliminating waste and increasing economy.

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- ③ WOODWORK, DOORS, PANELING
- ④ METAL SURFACES



This premium quality sealer is formulated for outstanding wear. It dries fast to eliminate costly delay occasioned by out-of-service floors. It is the lightest sealer in color that can be applied to wood, linoleum, cork, and concrete floors . . . and to other

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**The Peer
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Highest quality! The ultimate in floor wax. Hard, shiny lustre actually increases with wear.

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Formulated as above. Solids content slightly lower. Dries to brilliant lustre. Long wear, easy care.



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contains HYDRAOXATED CARNAUBA

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Cleans all floors to colorful beauty



ALKATROL

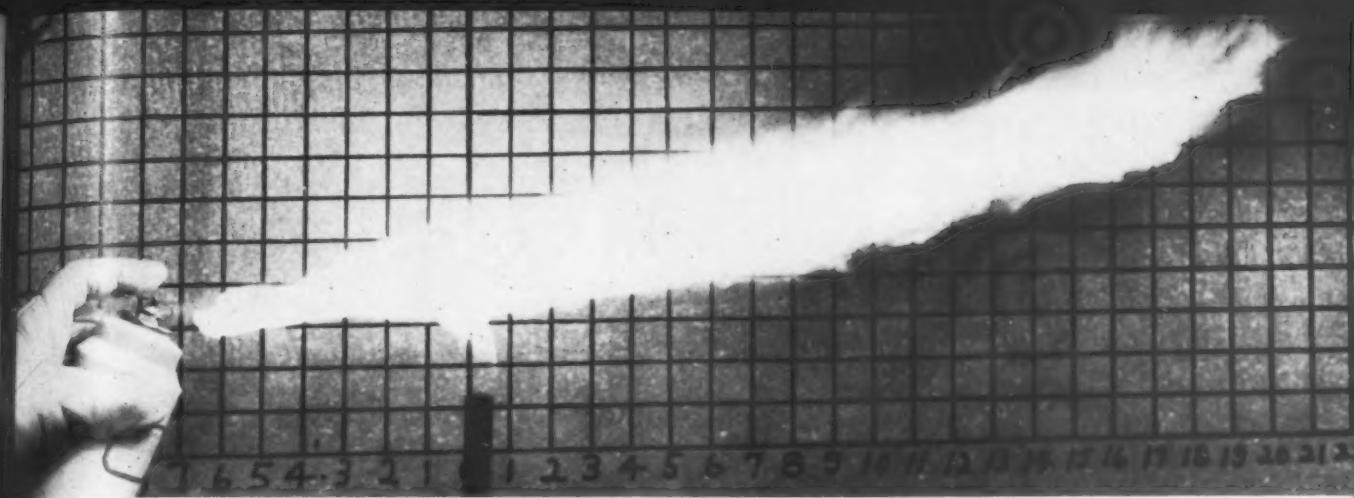
with *Colordyne*

Revives floor colors dulled by residual haze. Cleans floors *visually brighter!*

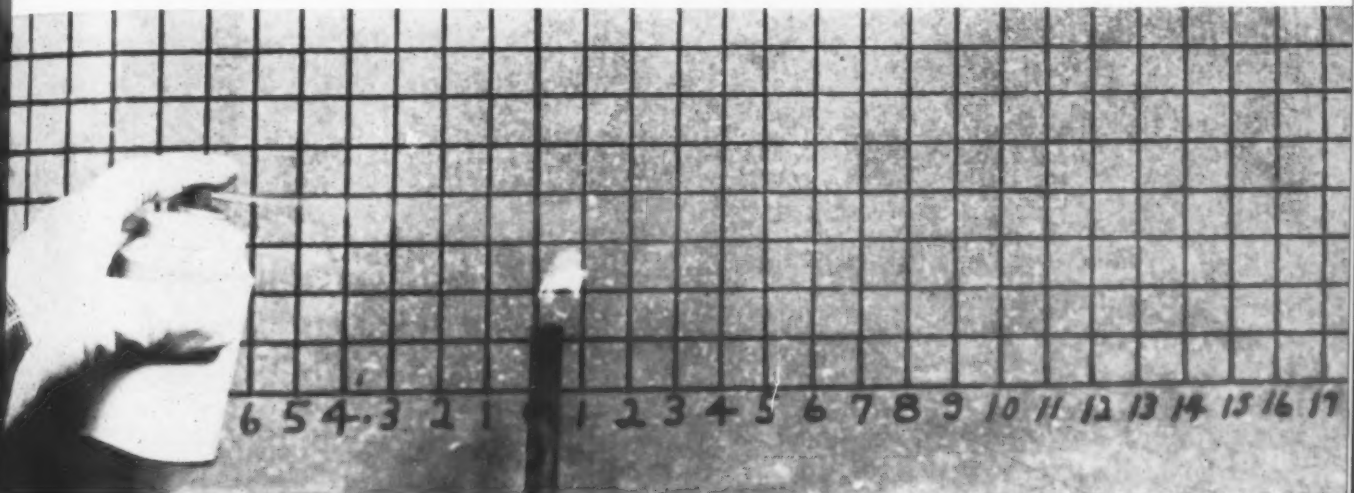
CHEMICAL SERVICE OF BALTIMORE INC.

Howard and West Streets • Baltimore 30, Md.

SOAP and CHEMICAL SPECIALTIES



"Flashback," greatest hazard of a flammable formulation. (NOTE: Although "Freon" propellents themselves are completely nonflammable, certain active ingredients and solvents may prove flammable, under specific conditions.)



Flame-extension test shows this formulation to be nonflammable. This is another of the many Du Pont laboratory services available to aerosol manufacturers and loaders.

FLAMMABILITY...another probing aerosol study at Du Pont

Marketing an aerosol—or planning to? Feel free to call on Du Pont if you have any formulation problems, since at the "Kinetic" Sales Service Laboratory, Du Pont chemists are solving such problems every day. Working with many product formulas and "Freon"® propellant solutions, they make searching tests into various properties of the formulations.

One such study is flammability, in which formulations undergo several tests. The first consists of spraying the solution into a Bunsen-burner flame 6" away (see above photos). If the flame extends 18" or more from the burner then, according to the ICC ruling, the product must be labeled "flammable." Of equal interest is a second experiment, which simulates box-car conditions by means of closed and open drums.

A chemist dispenses the solution into drum for one minute . . . checks the effects.

These studies benefit the manufacturer in two ways. First, he gets a complete laboratory report on his product's flammability or nonflammability. Secondly, he thus knows where he stands as regards the various regulations on labeling.

If the active ingredients of *your* aerosol are properly chosen and are formulated with a Du Pont "Freon" propellant solution—the reaction to the "flame test" will be the same as seen in the bottom photo. For "Freon" propellents are nonflammable, nonexplosive, virtually nontoxic. They provide efficient dispensing in every type of aerosol.

The Du Pont Company offers technical aid on many other aspects of aero-

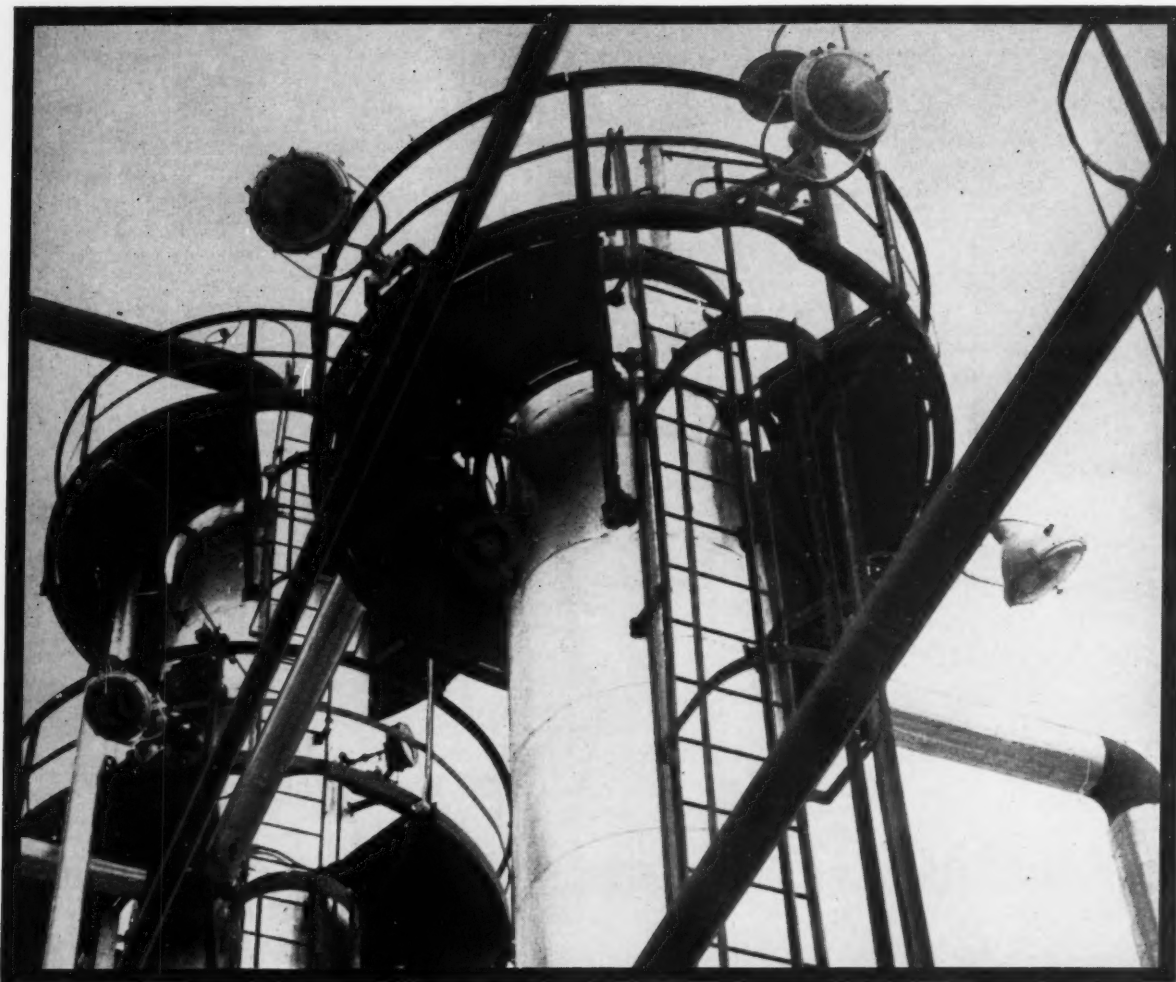
sol formulation, including density, compatibility, viscosity, stability and water content. So if we can help you in any or all of these steps, simply write: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



PETROLITE

a modern refinery with but one objective

**BETTER
WAXES**



Petrolite waxes are the products of a refinery designed primarily to achieve but one objective — the best in microcrystalline and synthetic waxes.

Every phase of the Petrolite operation supplements this primary objective. The location of the refinery, in the heart of the East Texas oil fields, provides easy access to the finest crude stocks for wax manufacture. Control laboratories, right in the refinery, enforce rigid manufacturing specifications and ensure product uniformity.

We believe Petrolite waxes compare favorably, or may prove superior to, any waxes, anywhere. We invite you to make your own comparison.

Complete information and samples are available on request.

*Petrolite waxes are
stocked at, and available
F.O.B., Jersey City, N. J.,
Chicago, Ill.,
Los Angeles, Calif.,
and Kilgore, Texas.*

PETROLITE CORPORATION

WAX DIVISION

Chrysler Building, New York 17, N.Y. • P. O. Box 390, Kilgore, Texas

IMPORTANT INFORMATION



...for manufacturers of sanitary specialties

Research men at Rohm & Haas have much practical information to help you—obtained in the laboratory and in the field during more than 25 years fighting insects and bacteria; developing detergents and emulsifying compounds for the formulators of sanitary specialties. The products they have created—insecticides, bactericides and surface active agents—are a result of what they have learned during this time.

In addition, Rohm & Haas scientists have developed many methods for accurately evaluating sanitary chemicals. The Peet-Grady test is a standard procedure for evaluating insecticides. The "Dynamic Detergency Test Method" for measuring hard surface detergency is the latest Rohm & Haas method to gain widespread recognition for evaluating detergent compounds.

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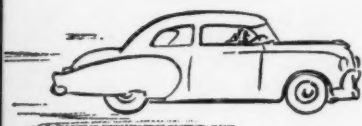
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House Powder Synergists

Tests of synergists with phosphorus compounds against the body louse increased the initial activity 10 times

By Gaines W. Eddy, M. M. Cole, and A. S. Marulli,*

U. S. D. A., Agr. Res. Adm., Bureau of Entomology and Plant Quarantine

DURING the last few years a number of organic phosphorus compounds have been tested against the body louse, *Pediculus humanus humanus* L. Although many of them were found to be highly toxic to this insect, no special emphasis has been placed on them owing mainly to the toxicity to man of the phosphorus insecticides first developed for insect control. However, the toxicological data on some of the phosphorus compounds having high insecticidal activity indicate that they may not be any more toxic to warm-blooded animals than are DDT and lindane, which are widely used on man for controlling the body louse.

Body lice in Korea have recently become resistant to DDT (Hurlbut *et al.* 1952, Eddy 1953). Although lindane and synergized pyrethrum powders are effective against these DDT-resistant lice (Eddy 1953), materials that provide longer lasting control would be desirable. Moreover, there is the possibility that the lice will become resistant to these substitutes, especially lindane.

In connection with the studies on the phosphorus compounds, the possibility of finding suitable synergists was explored. A large number of materials have been tested by various workers as synergists with pyrethrum. IN-930 (0-546), which appeared in 1938, was perhaps the first pyrethrum synergist.

*This work was conducted at the Orlando, Fla., laboratory of the Bureau of Entomology and Plant Quarantine under funds allotted to the Bureau by the Department of the Army.

Eagleson (1942) reported on sesame oil as a pyrethrum aid against house flies, *Musca domestica* L. Both these materials were shown to be effective with pyrethrum against the body louse (Bushland *et al.* 1944a). Carson and Eddy (1949) tested 446 compounds as pyrethrum synergists against the body louse, and found that many of them greatly increased the insecticidal action of the pyrethrum.

Numerous materials have been tested by various scientific organizations as synergists with DDT, mostly against resistant strains of the house fly. Tests with

some of these materials have been reported by Sumerford *et al.* (1951). However, few if any of them have proved to be of practical value.

The authors have tested many materials as synergists with rotenone, lindane, toxaphene, DDT, chlordane, and various other insecticides against the body louse, but none have been effective.

Experiments with a number of compounds to determine their effectiveness as synergists with the following phosphorus compounds are reported herein: 4-methylumbelliferone *O,O*-diethyl thiosphosphate

List of materials tested as synergists with phosphorus compounds

Orlando No. 0.	Name
546	IN-930 (N-isobutylhendecenamide)
8184	N-2-ethylhexylbicyclo[2.2.1]-5-heptene-2,3-dicarboximide
14250	Piperonyl butoxide
15266	n-Propyl isome (dipropyl 1,2,3,4-tetrahydro-3-methyl-6,7-methylenedioxy-1,2-naphthalenedicarboxylate)
16634	Sulfoxide (n-octyl sulfoxide of isosafrole, or 1,2-methylenedioxy-4-[2-(octylsulfinyl)propyl]benzene)
18323	1,2-Methylenedioxy-4-[2-(octylsulfonyl)propyl]benzene
20003	alpha-Allylpiperonyl chrysanthemumate
20026	p-(alpha,alpha-Dimethylbenzyl)phenyl propionate
20056	p-Cyclohexylphenyl propionate
20065	2,4-Di-tert-butyl-6-isopropylphenyl propionate
20089	alpha-Propylpiperonyl acetate
20091	alpha-Propylpiperonyl chrysanthemumate
20244	4-(3,4-Methylenedioxyphenyl)-sec-butyl chrysanthemumate
20272	alpha-Ethylpiperonyl chrysanthemumate
20309	alpha-tert-Butylpiperonyl chrysanthemumate
20313	5-Butyl-5-ethyl-2-(3,4-methylenedioxyphenyl)-m-dioxane
20332	alpha-Allylpiperonyl fencholate
20337	alpha-Isopropylpiperonyl chrysanthemumate
20412	alpha-Amylpiperonyl chrysanthemumate
20413	alpha-Butylpiperonyl chrysanthemumate
20414	alpha-(2-Methylallyl)piperonyl chrysanthemumate
20417	alpha-Cyclohexylpiperonyl acetate

(Potasan), 3-chloro-4-methylumbelliferone *O,O*-diethyl thiophosphate (Bayer compound 21/199), and 3-chloro-4-methylumbelliferone *O,O*-dimethyl thiophosphate (Bayer compound 21/200).

Methods

THE procedures described by Bushland *et al.* (1944b) and Eddy (1953) were used to test the candidate synergist as cloth impregnants (beaker tests) and, except compound 21/199, as powders (patch tests).

In the beaker tests the materials were dissolved in acetone at the desired concentration, and 0.7 ml. of the solution was applied by pipette to circular pieces of woolen cloth 1.5 inches in diameter. The treated pieces were suspended on pins, allowed to dry for about an hour, and then placed in a 50-ml. beaker with 20 adult lice, 10 of each sex. The beakers were held in an incubator at 30°C. and approximate-

ly 70 percent relative humidity. Counts of lice dead or knocked down were made after 24 hours. The results are given in terms of the total number of lice down or killed. The treated cloths were held at room temperature between tests.

In the tests on balbriggan cloth, patches 4.9 inches square were treated with a powder containing the insecticide and synergist diluted with pyrophyllite. One-half gram of the powder was spread evenly over the cloth with a spatula and lightly rubbed in with the fingers. The treated cloths were placed on boards slightly larger than the cloths to facilitate handling. Widemouthed metal jar rings (without the center disk), held in position with rubber bands, were used to confine the lice on the treated cloths. The procedures for testing the powder were the same as for the beaker tests.

The body lice were from a laboratory strain adapted for feeding on domestic rabbits. The meth-

ods used for rearing them were essentially the same as those described by Culpepper (1944, 1948).

Beaker Tests

TESTS with Potasan.—It was first found that the insecticidal activity of Potasan could be increased by the addition of sulf-oxide (0-16634). This material and three other candidate synergists were selected for further testing. Potasan was tested at 0.005, 0.0025, and 0.001 percent, alone and in combination with each of these synergists. Later, 13 other synergists were selected for similar studies. The results of both series of tests are shown in table 1.

As can be seen from the table, several materials caused a remarkable increase in the toxicity of Potasan. When used alone, Potasan was practically nontoxic at the highest concentration tested. In tests with the synergists alone, only two of them caused as much as 25-per-

Table 1. Initial and residual effectiveness of various materials as synergists with Potasan in beaker tests against body lice. Exposure 24 hours. Ratio of synergist to toxicant 10:1.

Synergist ¹ No. O-	Initial percent knock-down or kill with indicated concentration of Potasan			Percent knock-down or kill with 0.005% of Potasan after—						
	0.005%	0.0025%	0.001%	4 days	6 days	8 days	13-14 days	18 days	26 days	28 days
Series 1										
546	100	100	0	95	75	80	55	—	—	—
14250	100	100	0	100	95	100	100	100	75	—
16634	100	100	25	100	100	100	95	100	95	—
20003	100	100	35	100	100	100	95	95	70	—
None: Potasan alone	15	0	0	—	—	—	—	—	—	—
Untreated	5	5	5	0	5	0	0	0	5	—
Series 2										
8184	100	100	30	100	65	—	—	—	—	—
15266	100	95	70	100	100	100	100	30	—	—
16634	100	100	10	100	100	100	100	95	—	100
18323	100	90	0	100	100	100	100	80	95	100
20026	90	90	0	90	95	80	30	—	—	—
20056	100	70	10	100	25	—	—	—	—	—
20065	100	30	0	100	15	—	—	—	—	—
20089	100	100	50	100	30	—	—	—	—	—
20091	100	100	100	100	100	100	100	40	—	—
20244	100	100	90	100	100	100	100	80	90	40
20272	100	100	90	100	100	95	100	45	—	—
20313	100	100	90	100	100	100	100	100	100	85
20332	100	100	70	100	100	100	95	20	—	—
20337	100	100	100	100	100	100	100	60	—	—
None: Potasan alone	20	0	0	—	—	—	—	—	—	—
Untreated	5	5	5	0	0	5	0	0	0	0

¹ Names of the synergists are given in list above.

Table 2. Effectiveness of Potasan alone and combined with three synergists in beaker tests against body lice. Exposure 24 hours.

Percent concentration		Percent knock-down or kill with Potasan			
Potasan	Synergist	Alone	Plus 0-20091	Plus 0-20309	Plus 0-20337
0.025	—	100	—	—	—
.01	—	70	—	—	—
.005	—	20	—	—	—
.0025	0.025	0	100	100	100
.001	.01	0	30	80	60
.0005	.005	0	5	5	0
Control (untreated)		0	0	0	0

cent knock-down or kill of lice in 24 hours at the highest concentration tested (0.05 percent).

Similar tests were made on the residual effectiveness of these materials. The results are also shown in table 1. In the first series three of the four materials were equally effective and distinctly superior to IN-930 (0-546). In the second series sulfoxide (0-16634), 1, 2-methylenedioxy-4- [2-(octylsulfonyl) propyl] benzene (0-18323), 4-(3,4-methylenedioxyphenyl) -*sec*-butyl chrysanthemumate (0-20244), and 5-butyl-5-ethyl -2- (3,4-methylenedioxyphenyl) -*m*-dioxane (0-20313) were the most effective of the 14 materials tested.

More exacting data on the effectiveness of synergists with Potasan were obtained in further

tests with three materials. The data, which are shown in table 2, indicate that the toxicity of Potasan was increased as much as 10 times.

Tests with compound 21/199.—Beaker tests very similar to those made with Potasan were run with compound 21/199. In determining the minimum effective concentration, the synergists were tested at 0.05, 0.025, and 0.01 percent in combination with 0.005, 0.0025, and 0.001 percent of compound 21/199, respectively. The highest concentration was used in the tests on the residual effectiveness of the synergists. The data are shown in table 3.

Several of the synergists appeared to be equally effective with compound 21/199 in the initial tests, but 1,2-methylenedioxy -4- [2-(oc-

tylsulfonyl) propyl]benzene (0-18-323) and 5-butyl -5- ethyl -2-(3,4-methylenedioxyphenyl) -*m*-dioxane (0-20313) gave the best results in the residual tests.

Tests with compound 21/200.—Nine materials were evaluated as synergists with compounds 21/200 in beaker tests against body lice. The concentrations and the tests were the same as those for the other two compounds. The results are presented in table 4.

In the tests on the minimum effective concentration, compounds 4-butyl -5- ethyl -2-(3,4-methylenedioxyphenyl)-*m*-dioxane (0-20313), *alpha*-allylpiperonyl fencholate (0-20332), and N-2-ethylhexyl bicyclo [2.2.1] -5-heptene -2,3- dicarboximide (0-8184) were the most effective. However, the last two materials were not highly effective from a residual standpoint. In the tests on the residual effectiveness, the first material named (0-20313), piperonyl butoxide (0-14250), and 1,2- methylenedioxy -4- [2-(octylsulfonyl) propyl] benzene (0-18-323) proved the most effective. Although compound 21/200 caused 90 percent knock-down or kill of lice alone at the highest concentration (0.005 percent), it exhibited little or no toxicity to lice at lower concentrations. The kill of lice

(Turn to Page 143)

Table 3. Initial and residual effectiveness of various materials as synergists with compound 21/199 in beaker tests against body lice. Exposure 24 hours. Ratio of synergist to toxicant 10:1.

Synergist No. 0-	Initial percent knock-down or kill with indicated concentration of compound 21/199			Percent knock-down or kill with 0.005% of compound 21/199 after —					
	0.005%	0.0025%	0.001%	13 days	15 days	19 days	22 days	26 days	29 days
14250	100	100	0	100	100	95	95	100	55
15266	100	35	0	100	95	55	—	—	—
18323	100	75	0	100	100	100	100	100	95
20003	100	100	0	100	95	70	25	—	—
20091	100	95	5	100	100	85	80	90	55
20272	100	100	20	100	100	65	60	—	—
20313	100	100	10	100	100	100	100	100	95
20332	100	100	25	100	95	80	50	—	—
20337	100	95	0	100	100	85	75	90	25
16634	100	100	0	100	100	100	100	95	45
None: Compound 21/199 alone	15	0	0	0	0	0	5	0	0
Untreated	0	—	—	—	—	—	—	—	—



Left to right, above: Joseph Nifoussi with his partner, Abe Widis, of A & J Distributors, New Brunswick, N. J.



In center photograph, Mr. Nifoussi demonstrates to a customer a portable vacuum cleaning unit.



Mr. Widis, left, discusses the merits of soap dispensers to a customer in the new showroom of A & J Distributors.



A hot the-sp of a w machi

Custodial Training: Jobber Sales Aid

A custodian training program initiated by the A & J Distributors, sanitary supply jobbers, New Brunswick, N. J., has found great favor among its customers as well as being an excellent good-will builder for the firm.

"We have always maintained that a sanitary supply jobber must go a little further than just being a products distribution point," says Joseph Nifoussi, who is a partner with Abe Widis in this firm. "We try to render our customers every service possible and in particular have found our custodian training program to be of tremendous importance in building up a tie between our customers and our business."

These two young aggressive partners have tried to develop their business through the year by giving service, information and help, in the way of informing and assisting their customers in getting the best possible use from the products that they handle. They have always maintained that in order to develop a sanitary supply busi-

ness, that the growth factor depended upon retaining old customers and constantly adding new ones. And the successful growth of the A & J Distributors can be attributed to this policy.

"In addition to the selling of our products to our customers," explains Joseph Nifoussi, "we must sell ourselves. We want our customers to know that we will go out of our way at all times to be of service to them. And the operation of our custodian training program that has no commercial tie-in with our sales functions is a splendid example of our policy."

Expert Instructions

THE custodian training program covered by A & J Distributors extends over a four week period, with one session each week. Different topics and techniques are discussed and demonstrated at each session. These include floor waxing, stripping, proper use of equipment, maintenance of wooden floors, asphalt tile, terrazzo, etc. Instructions are given by A & J experts in these lines as

well as by representatives of manufacturers.

"We have always felt that by properly instructing and training the personnel who handle maintenance duties, that it makes them even more valuable to their employers," explains Mr. Nifoussi. "This promotes the dignity of their position and enhances their standing. In fact, we are constantly trying to persuade our customers to call their maintenance personnel "custodians" because this title covers their duties more than any other."

A minimum of six custodians is required for each training session. Each session is held in a location where an actual demonstration can be made. As many school boards, large manufacturing firms and industrial plants approve of these training sessions, proper locations can be found. In fact, these sessions are so highly approved by A & J customers, that they permit their employees to attend these sessions on company or working time.

When mixed sessions are held with custodians from different



A hotel school custodian is given on-the-spot instruction in the correct use of a water pickup attachment on a floor machine by Mr. Nifoussi.

New home of A & J Distributors (top, right) on heavily traveled Route No. 1 in Raritan Township, N. J.

By Phil Lance

schools, plants or businesses, they take place in a specially arranged section of this firm's building. A large section of the building is set aside exclusively for this use. Custodians can gather here for any type of operation and in any number to get proper instructions and training in the maintenance field.

"We have many customers that may only have one or two custodians and not be in a position to set aside any particular area for a session," says Mr. Nifoussi, "and in these cases, we conduct them in our own building. We can accommodate any number of custodians. After these sessions, they can browse through our showroom and warehouse, and are served refreshments. And our records show, that unless it was because of an emergency or some other important situation, that each custodian was present at all sessions."

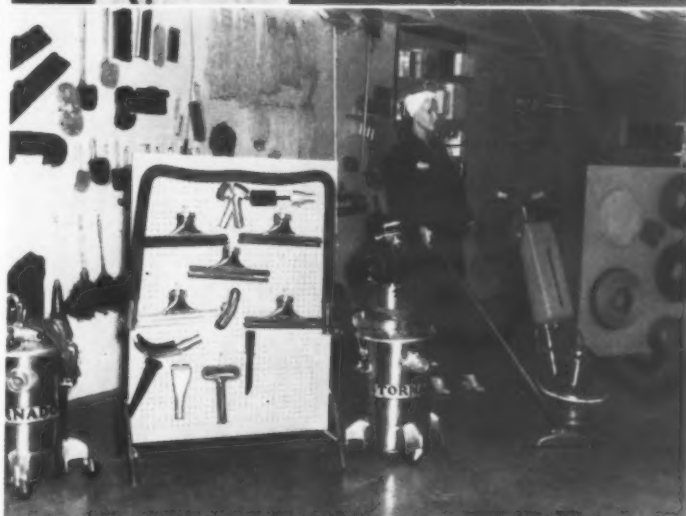
Steady Business Growth

THE two partners started their business back in 1946 as tobacco and confectionary wholesalers. While making visits to custom-

Constant checking assures complete stocks at A & J Distributors. In second photograph from top Mr. Nifoussi is making one of his periodic checkups.

Floor machines represent a large share of the business of A & J Distributors. The display (at right) in the new showroom is complete with mannequin.

By demonstrating just what to expect from a floor machine and how to operate it for most efficient results, as Mr. Nifoussi is doing, (in bottom photograph), sales of floor machines have increased for this jobber.





A demonstration given to a group of school custodians in a school building by A & J Distributors.

ers, they were asked if they could supply them with some sanitation products and they did so as an accommodation. But the requests for these "accommodation" items increased and the two partners invested \$400 for a small inventory of sanitary supply products.

The demand for these products soon outgrew the other lines and within a year, the A & J Distributors became exclusively sanitary supply jobbers. The partners then established the policies and principles that have enjoyed such splendid customer support that they were forced to add space a number of times to take care of their increased stocks.

In April of this year, A & J Distributors moved to a new location along route #1 in Raritan Township, N. J. The new building embodies the warehouse, display room, offices and demonstration area under one roof. In previous locations, operations were divided between buildings and the move was made because it was felt that everything under one roof would add to the efficiency of the business. The firm now has over 7200 sq. feet of main floor space and 1500 sq. feet of space in a loft.

"We consider our location

along heavily traveled U. S. route #1 an excellent location," says partner Abe Widis. "Over 20,000 cars a day pass by on this Philadelphia-New York highway and even though in the main, few have anything to do with our business, local businessmen, purchasing agents and others who are our prospects see our new building, so that they remember us when we call on them.

"This area is becoming heavily saturated with industry which makes it more fertile for our type of operation. Within a radius of half a mile, we have over 20 large industrial firms and more are coming here. With the plants, more businesses are developing with its resultant impact on general population growth. That means more schools and other buildings that have to use our products. And as this area grows, we intend to grow with it."

Three salesmen, in addition to the two partners, cover the entire area. Each salesman has a definite area assigned to him and he covers it thoroughly. All products handled by A & J carry their own "Crown" products label.

"We feel that it is best to carry a line of products with our own label because we want to build up faith and confidence in them on the part of our customers," explains Mr. Widis. "Furthermore, by promoting our own brand of products, we aren't competing with any others. Our customers know that we are only selling the best and stand behind them 100 percent. For this reason, our "Crown" label appears on every product that we handle."

Customers get 48 hour or faster delivery if requested. Two A & J trucks make regular trips throughout the area and the more distant customer has deliveries made by public carriers.

Sales Promotion

A modern showroom is an important sales factor for A & J. Samples of every product handled by the firm are on display, as well as a complete line of floor equipment. The showroom is enhanced by modern wall displays, mannequins handling floor equipment and colorful wall back-grounds.

"In our estimation, a showroom is a very important feature for a jobber," points out Mr. Widis. "In many cases, a customer will

visit our place of business before they decide to do their buying, and a modern display room certainly helps to attract the customer to us.

"Then on occasion, our salesmen will bring customers in to demonstrate our products and equipment. In fact, we are endeavoring to get our customers to visit us whenever they are in the vicinity. This helps to give them a better idea of the jobber with which they are doing business, permits them to see our entire line and make selections best suited for their purposes."

Each month, between 1000 and 1500 pieces of literature are mailed out to customers by a local mailing service. This takes the mailing burden off the shoulders of company personnel so that they can devote all their efforts to their regular duties. Mailing pieces are divided between the literature supplied by manufacturers and those printed by the jobber.

Selling Floor Machines

IN the words of these partners, "nothing can take the place of an actual demonstration to sell floor machines." For this reason, each salesman has a complete set of equipment in his car when making customer calls.

"When we determine that a prospect is ripe for a floor machine, we open the door towards a sale by asking for time to make an actual demonstration," says Joseph Nifoussi. "Not only do we want the customer present, but we also ask him to include the custodian who is to use the equipment."

"We never make a spot demonstration. Our demonstrations cover the entire area where we are showing our equipment. We find such demonstrations much more effective because the customer can see for himself how an entire area looks after the use of our equipment. It also gives him an opportunity to ask questions, let the custodian handle the equipment and sell himself on it."

After a floor machine is purchased by a customer, salesmen

make follow-up visits to determine their satisfaction. This shows customers that A & J stand behind their initial sales with service if required later on.

In addition, every floor machine sale means future sales of required cleaners, waxes and other products for use with the machine. A floor machine sale therefore, paves the way for continued sale of required maintenance products.

"Last year, we sold over 150 floor machines," says Mr. Nifoussi, "and this year we expect to increase this substantially. In our opinion, we feel that the surface hasn't even been scratched, insofar as the sale of this equipment is concerned. We feel that if time is taken out to demonstrate this equipment, that a ready market is in the offing. And by demonstrating this equipment, either in the customer's place of business or in our own building, that sales can be closed very quickly."

The firm maintains inventory records of its stocks so that re-orders can be placed when they reach a minimum level. These cover the fast moving items. Careful warehousing checks assure the firm of having an ample supply of all other products and these help to establish safe inventory conditions.

All merchandise is warehoused by classification of product so that the shippers can prepare customer orders quickly. This also paves the way for better inventory control and assures a more efficient warehousing operation.

Koppers Styrene Bulletin

Koppers Co., Pittsburgh, Pa., issued recently a 23-page illustrated brochure describing styrene monomer and its various industrial uses. Polystyrene, made by the polymerization of styrene, is used in the manufacture of emulsion-type floor waxes. It is said to improve slip resistance and gloss of these products. Bulletin C-4-198 can be obtained by writing to the Chemical Division of Koppers Co., Pittsburgh 19, Pa.

Trail Blazers' Exhibit

The 8th National Chemical Exposition to be held in Chicago October 12 to 15 will include the usual Chemical Trail Blazers' Exhibit, it was announced recently. Requests for space, which is available free to any chemist with a new idea, new material, new device or observation, should be sent to Dr. Paul E. Fanta, Trail Blazer chairman, Illinois Institute of Technology, Chicago 16.

— ★ —

MRM Aerosol Machine

The addition of an aerosol filling equipment division has just been announced by Herman Manas, president of MRM Co., Brooklyn, N.Y. The division has recently completed a fully automatic aerosol machine that fills, clinches and gasses, and can handle both metal and glass containers. MRM Co. continues to make its line of liquid filling machines.

The new MRM aerosol unit has an automatic conveyor equipped with timing devices for carrying containers automatically along the conveyor to the filling station where they receive an accurate, controlled material fill and then continue toward the clinching station. Prior to reaching the clinching station, an operator inserts the valve cap into the container. The container is automatically clinched, and then proceeds along the conveyor to the gassing station, where the propellant is inserted automatically.

The only manual operation is the placing of the valve cap. The machine can be serviced by unskilled labor and is of simple design.

A special air evacuation unit, claimed to be an exclusive MRM development, to remove trapped air before the propellant is inserted, assures accurate measurement and thorough mixing of the propellant and the filling material.

The new MRM automatic aerosol machine is said to have a production capacity of up to 120 containers a minute. It is claimed to require little floor space.

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Sanitizing Effect of Quats

Benzalkonium chloride is not adversely affected by synthetic hard water at 450 ppm or less hardness at exposure periods of two minutes. There may be some delay in killing action in shorter exposures.

By John W. Klimek and John Hays Bailey*

Sterling-Winthrop Research Institute

THE quaternary ammonium germicide benzalkonium chloride has been widely used (a) in relatively concentrated solution where disinfection is essential, and (b) in more dilute solution for sanitizing objects where complete asepsis is either unnecessary or is impractical. The concentration of benzalkonium chloride suggested for most sanitizing applications has been 200 p.p.m. Various substances which may be encountered in domestic water supplies have been reported to be able to antagonize the germicidal activity of benzalkonium chloride. Such reputedly antagonistic substances include "hard water", metallic ions such as iron and aluminum, and organic matter. The quantitative aspects of these "incompatibilities" have not been adequately reported. Efficient application of any germicide must take into consideration the immediate objective, the specific virtues of the germicide, and the limitations of that germicide with respect to the specific conditions of use. Our laboratory has been carrying out an extensive study to define quantitatively the limiting factors which might influence the conditions of use of benzalkonium chloride. The present report is limited to a review of the germicidal action of benzalkonium chloride 200 p.p.m. under a

variety of controlled conditions which have been presumed to be inimicable to the sanitizing efficiency of this compound.

In considering the results presented below, it should be borne in mind that the conventional objective in use of a sanitizing agent is the nonspecific reduction of environmental bacterial contamination to a level which minimizes related hazards of spoilage or spread of contagious disease. It should also be noted that the application of a germicide is never a permissible substitute for proper cleansing of the object or surface being sanitized.

The Weber and Black procedure (1) was selected for the basic procedure because it has been used for unfavorable comparisons of sanitizing agents.

All subcultures were carried

out in media containing lecithin-"Tween 80"*** as an inactivator. The test organism was *Escherichia coli* strain #198. The bacterial population exposed to germicidal action was gauged to approximate 100 million organisms per cc. Benzalkonium chloride was prepared as a 400 p.p.m. solution in the test water, which was also used as the suspending agent for the test organisms; equal volumes were mixed to yield the experimental medication mixture. The duration of exposure was 30 seconds, one, two and three minutes. The number of survivors was determined by transfer to inactivation buffer at the end of each exposure period and subsequent plating in duplicate. The average bacterial count of the duplicate plates after 48 hours in-

***Tween 80 is made by Atlas Powder Co., Wilmington, Del.

Table 1. Sanitizing Action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) on *E. coli* 198 at 25°C.

Cells/cc med. mix. X10 ⁶	Number/cc Surviving Exposure for			
	30 sec.	60 sec.	120 sec.	180 sec.
167.15	715	30	0	—
152.3	275	20	0	—
148.75	105	0	0	—
87.6	100	0	0	—
81	10	0	0	0
81	40	0	0	0
75.75	58,900	4,910	0	—
75.75	13,520	11,660	460	—
54	39,360	7,400	2,880	10

*Paper presented before 40th midyear meeting, Chemical Specialties Manufacturers Assn., Cincinnati, May 24, 1954.

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incubation at 37°C. was used to calculate the number and per cent of survivors per cc of medication mixture. The number of bacteria per cc of inoculum was determined routinely, to establish the range of variation of suspensions prepared daily in a similar manner. All tests were at 25°C. unless otherwise specified. The germicidal efficiency of benzalkonium chloride as determined in synthetic hard water of 450 p.p.m. hardness, with or without added Fe and Al ions, tap water, well water, and synthetic dirty water, is illustrated in the accompanying tables.

The range of variation of sanitizing action of benzalkonium chloride in synthetic hard water of 450 p.p.m. hardness is shown in the nine different tests recorded in table 1. Within 30 seconds, the bacterial population was reduced at least 99.999% in all but three tests. At two minutes, destruction was essentially complete in all but two tests, and three minutes exposure left few if any survivors. It is noteworthy that survivor rate at 30 seconds was not always related to the size of the population in the inoculum.

Table 2 shows that the sanitizing efficiency of benzalkonium chloride 200 p.p.m. is not markedly affected by synthetic hard water of 50, 150 and 300 p.p.m. hardness when the inoculum has not been suspended in the test water. Hardness per se would not be expected to alter significantly the sanitizing efficiency of a detergent-sanitizer solution prepared with hard water, for sanitizing processing equipment.

Table 3 shows that the addition of iron to synthetic hard water of 450 p.p.m. hardness had little if any deleterious effect at an alkaline pH. Aluminum ion resembles iron in behavior, as shown in table 4.

Table 5 illustrates the effect of pH on the sanitizing action of benzalkonium chloride in the presence of iron or aluminum in water of 450 p.p.m. hardness. It is clearly

Table 2. Sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water of various degrees of hardness on *E. coli* 198 at 25°C.

Hardness	Cells/cc med. mix. X 10 ⁶	Number Surviving Exposure for:		
		30 sec.	60 sec.	120 sec.
50	115.6	50	0	0
150	115.6	115	—	10
300	106.3	20	0	0
50	85.8	170	30	0
150	85.8	145	0	0

Table 3. Sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) and iron on *E. coli* 198 at 25°C.

Cells/cc med. mix. X 10 ⁶	Fe ppm	Number Surviving Exposure for:			pH
		30 sec.	60 sec.	120 sec.	
152.3	0	275	2,915	60	7.75
75.5	0	58,900	4,910	0	8.0
152.3	1	1,050	210	0	7.7
75.5	1	100	0	0	8.0
152.3	2.5	835	200	55	7.6
75.5	2.5	1,310	0	10	7.8
152.3	5.0	570	290	20	7.3
75.5	5.0	215	0	0	7.7

Table 4. Sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) and aluminum on *E. coli* 198 at 25°C.

Cells/cc med. mix. X 10 ⁶		Number Surviving Exposure for:				pH
		30 sec.	60 sec.	120 sec.	180 sec.	
87	100	0	0	—	—	7.95
148.7	105	20	0	0	—	8.1
87	200	30	0	—	—	7.8
87	30	0	0	—	—	7.25
87	70	0	0	—	—	7.4
148.7	505	20	0	0	—	8.1

Table 5. Effect of pH on sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) and aluminum and iron on *E. coli* 198 at 25°C.

pH	Al ppm	Fe ppm	Number Surviving Exposure for:			Cells/cc med. mix. X 10 ⁶
			30 sec.	60 sec.	120 sec.	
7.5	0	0	10	0	0	81
6.8	0	0	13,520	11,660	460	75.75
8.0	0	0	11,780	5,260	0	75.75
6.7	5	0	tnc*	tnc*	tnc*	81
7.8	5	0	30	0	0	81
6.1	0	1	2,650	180	60	75.75
8.0	0	1	100	0	0	75.75

*Too numerous to count.

ly demonstrated that aluminum (five p.p.m.) antagonizes the germicidal activity of benzalkonium chloride at pH 6.7 but is not antagonistic at pH 7.8. At a pH of

6.7 aluminum five p.p.m. gave survivors too numerous to count at the end of two minutes exposure, whereas at pH 7.8 all but 30 of the original 81 million bacteria/cc

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Table 6. Sanitizing action of 200 ppm benzalkonium chloride in well water (328 ppm hardness; trace Fe) on *E. coli* 198 at 25°C.

Cells/cc med. mix. X 10 ⁶	Number Surviving Exposure for:				
	30 sec.	60 sec.	120 sec.	180 sec.	240 sec.
186	7,270	220	10	20	0
186	7,570	960	0	10	0
186	8,100	103	120	0	0
124	38,400	11,910	30	0	0
124	44,800	5,250	4,295	0	0
208	115,200	83,200	5,050	0	0

Table 7. Sanitizing action of 200 ppm benzalkonium chloride in Rensselaer tap water (56 ppm hardness; 0.4 ppm Fe) on *E. coli* 198 at 25°C.

Cells/cc med. mix. X 10 ⁶	Number Surviving Exposure for:				
	30 sec.	60 sec.	120 sec.	180 sec.	240 sec.
186	tnc*	54,000	665	10	0
186	tnc*	28,000	130	10	0
186	tnc*	52,000	140	0	0
115.3	76,800	5,500	0	0	0
115.3	64,000	5,400	0	0	0

*Too numerous to count.

Table 8. Effect of temperature on sanitizing action of 200 ppm benzalkonium chloride in synthetic dirty water on *E. coli* 198.

Cells/cc med. mix. X 10 ⁶	Temperature	Number Surviving Exposure for:	
		30 sec.	60 sec.
141	25	tnc*	470
141	25	51,200	200
141	45	30	10
141	45	0	0
144.78	45	30	0
144.78	45	90	10

*Too numerous to count.

Table 9. Sanitizing action of use dilution of benzalkonium chloride (R) and a detergent iodine compound (I) at 37°C. Synthetic dirty water prepared with two hard waters. Inoculum 109 x 1^{cc} *E. coli* 198.

Compound	Hardness ppm	% Killed Following Exposure for:	
		30 sec.	60 sec.
I	0	99.86	99.9959
R	0	99.997	99.9995
I	300	tnc*	tnc*
I	328	tnc*	tnc*
R	300	99.9969	99.99986
R	328	99.9958	99.99929

*Too numerous to count.

were destroyed within 30 seconds. Provision of an alkaline reaction appears to be all that is required to assure the full activity of benzalkonium chloride in hard water (450

p.p.m) with a high content of aluminum or iron.

Results obtained when using well water of 328 p.p.m. hardness and containing a trace of iron are

shown in table 6. With one-half and one minute exposures a moderate number of survivors were found but by two minutes the population had been reduced at least 99.9976%, and at three minutes 99.9999%.

Similar results were obtained with another natural water, that of Rensselaer, N. Y. This water has a hardness of but 56 p.p.m., contains 0.4 p.p.m. iron, and has a pH of 7.2. At the shortest exposure the results tabulated in table 7 are in sharp contrast with those obtained in the synthetic hard water. The 30 second exposure to benzalkonium chloride resulted, in one experiment done in triplicate, in plates containing so many colonies they could not be counted; in another experiment a 99.935% and 99.945% reduction in population were obtained. On one minute exposure some improvement in the per cent killed was noted. At two minutes, however, only a few (0.014%) of the original population remained alive and at three minutes virtually all were killed. An unqualified conclusion that Rensselaer tap water is incompatible with benzalkonium chloride therefore would be inaccurate. There was a degree of interference, of unknown origin, which operated during the first periods of exposure only, the final result being good killing action within three minutes.

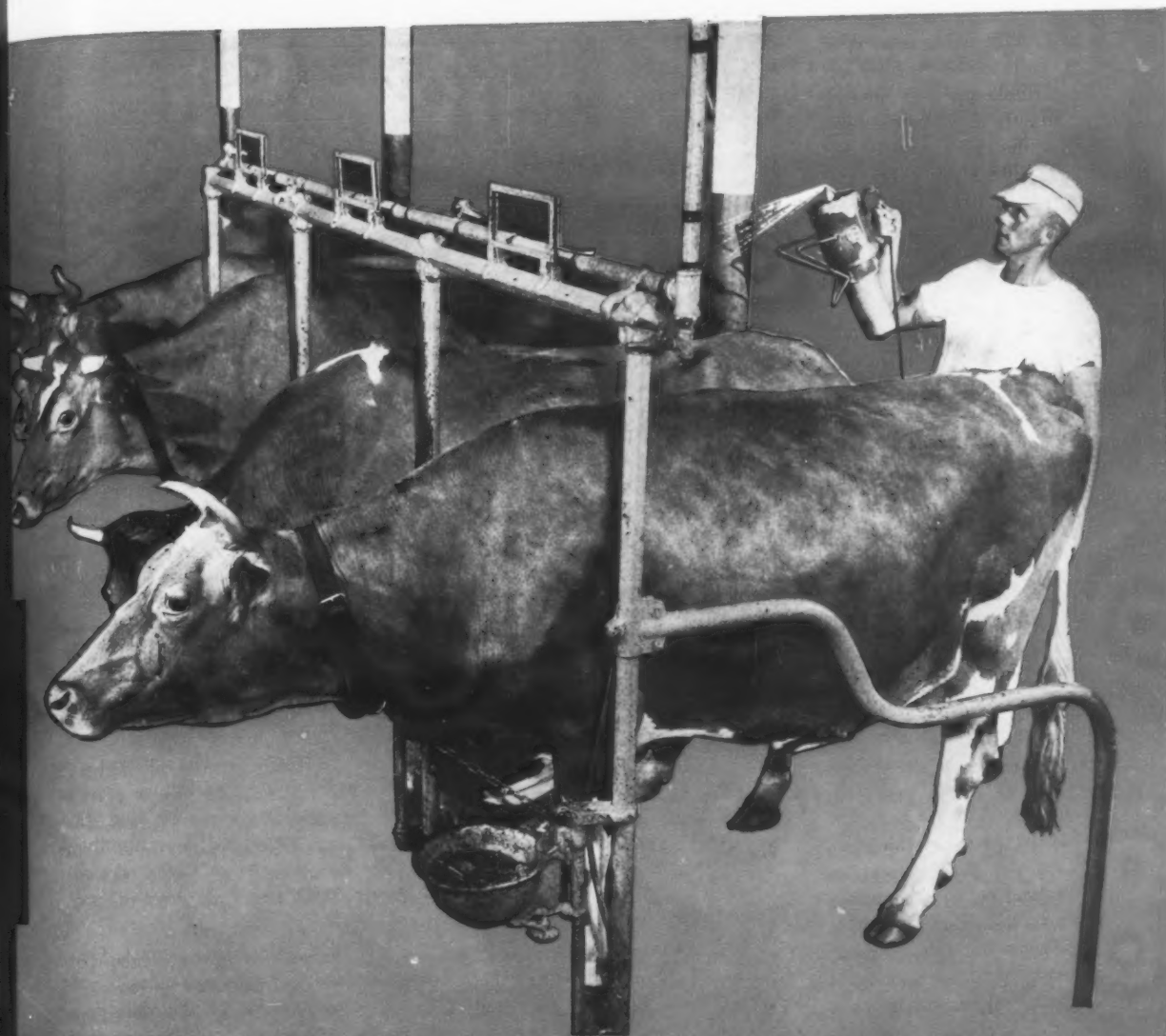
None of the waters used above contained an appreciable amount of organic matter. What kind of sanitizing action could be expected from benzalkonium chloride in a dirty water containing organic matter such as might accumulate in water used to rinse off mess kits? Such a test water has been formulated by Allport (2) who based the formula on analysis of the contents of a dishwashing tank at the time the water was normally changed for clean water in a canteen serving approximately 200 patrons in England. The synthetic dirty water contained .05% NaCl, .05% peptone, .08% glucose,



The illustration is a black and white advertisement for 'thanite' sprays. It features two women. The woman at the top is shown from the chest up, wearing a light-colored short-sleeved dress with a cherry brooch. She is holding a small aerosol can and spraying its contents upwards. The woman at the bottom is shown from the side, wearing a light-colored short-sleeved blouse. She is holding a long-handled pump sprayer and spraying it towards a can that is floating in the air. The background is a simple, dark grey gradient. A black horizontal band across the middle contains the brand name 'thanite' in a large, bold, white sans-serif font, followed by a registered trademark symbol. To the right of the brand name, the words 'SPRAYS FOR QUICK KNOCKDOWN AND HIGH KILL' are written in a smaller, bold, white sans-serif font. On the far right edge, there is a partial illustration of a cow's head and some text from another page.

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.05% dried skimmed milk, .03% cornstarch and .15% teaseed oil. Later the formula was enriched by the addition of .1% whole egg. Table 8 contains the results of experiments conducted in dirty water. Since dishes are supposed to be washed in "hot" water two temperatures were employed, 25 and 45°. In water at 25° and only 30 seconds exposure the sanitizing action of benzalkonium chloride was slightly impaired; but 30 seconds later the population was reduced 99.99997%. At the higher temperature, an exposure of only one-half minute gave equally good or better results.

Recently new iodine-complex compounds have been introduced as sanitizing agents. A comparison of one of these compounds with benzalkonium chloride at 37° in dirty water, using well water of 328 p.p.m. hardness and a synthetic hard water of 300 p.p.m. hardness is shown in table 9. Under these conditions benzalkonium chloride was definitely superior in sanitizing action.

Table 10 presents the sanitizing effects of benzalkonium chloride obtained when Rensselaer tap water was used for the preparation of synthetic dirty water containing egg. Within three minutes exposure all exposed cells were rendered nonviable; at two minutes the population had been reduced at least 99.99988%. In our experience this is about the ultimate in unfavorable conditions for sanitizing uses of benzalkonium chloride.

If it be considered necessary to improve the excellent results obtained in hard water plus metallic ions the addition of "Versene"*** or trisodium phosphate will give results as shown in tables 11 and 12. With 1-2 mg/cc of either sodium ethylenediaminetetra acetate or trisodium phosphate present in the medication mixture complete destruction of the inoculum was accomplished on 30 seconds exposure.

It should be unnecessary to

***Versene is made by Bersworth Chemical Co., Framingham, Mass.

Table 10. Sanitizing action of 200 ppm benzalkonium chloride in Rensselaer tap — synthetic dirty water with egg on *E. coli* 198 at 25°C.

Cells/cc med. mix. X 10 ⁶	Number Surviving Exposure for:				
	30 sec.	60 sec.	120 sec.	180 sec.	240 sec.
128.56	6590	160	0	0	0
128.56	1820	70	0	0	0

point out that sanitizing agents are intended for use on previously cleansed surfaces. In these experiments benzalkonium chloride has destroyed populations equivalent to the mean viable bacterial count of 26.3% fecal suspension (3) and brought this about in the presence of organic and inorganic contamination. These factors, as well as time, should be considered in any evaluation of a sanitizing agent. The high intrinsic potency of benzalkonium chloride is well known. We have presented the results of evaluation tests carried out under highly unfavorable conditions, all of which could be readily offset by slight extension of exposure time, slight elevation of temperature, or shift of pH to the alkaline side.

Conclusions:

1. The sanitizing effect of benzalkonium chloride is not adversely affected by synthetic hard water of 450 p.p.m. or less hardness at exposure periods as short as two minutes. With shorter exposures there may be some delay in killing action (in three of nine tests) but at 30 seconds there was

never less than 99.92% of the organisms destroyed.

2. The sanitizing action of benzalkonium chloride is not adversely affected by iron in concentrations up to five p.p.m. hardness in alkaline waters at exposure periods of approximately two minutes.

3. The sanitizing action of benzalkonium chloride is not adversely affected by aluminum in concentrations up to five p.p.m. in alkaline hard water of 450 p.p.m. hardness on exposure periods of approximately one minute.

4. Certain natural waters retarded the rate of kill as shown by 30 seconds exposure, but the sanitizing action of benzalkonium chloride in the same water was entirely satisfactory at two minutes exposure.

5. In comparative tests benzalkonium chloride was more effective than certain of the detergent iodine sanitizers in the natural waters used in these experiments and in synthetic dirty water prepared from one of these.

6. No viable organisms could

(Turn to Page 155)

Table 11. Effect of "Versene" on sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) and aluminum on *E. coli* 198 at 25°C.
87 x 10⁶ cells/cc.

Al. ppm	Versene mg/cc	Number Surviving Exposure for:			pH
		30 sec.	60 sec.	120 sec.	
0	0	100	0	0	7.95
1	0	200	3	0	7.8
2.5	0	30	0	0	7.65
5.0	0	70	0	0	7.4
0	2	0	0	0	10.0
1	2	0	0	0	9.95
2.5	2	0	0	0	9.9
5.0	2	0	0	0	9.8

Foil Moth Product Packages

The successful use of foil wrapped packages of moth products for sale through food stores was announced recently by two major packagers of moth products. Click Chemical Co., Mount Vernon, N.Y., is now featuring its line of para crystals in a spiral wound cardboard tube with metal ends and wrapped in Reynolds aluminum foil. The foil is printed in two or three colors by King Convertors, Inc., Rockaway, N. J.

Also adopting the foil wrap package idea is the Barrett Division of Allied Chemical & Dye Corp., New York. Barrett is repackaging its "Polar" naphthalene moth rings, flakes and balls in a rectangular cardboard package that is foil wrapped and printed in three colors.

The use of the aluminum foil virtually eliminates odors emanating from packages of para and naphthalene moth products, and thus makes it feasible for these items to be sold through food stores. Heretofore, the odor from the moth products could be picked up by foods, which thus prevented food stores from handling such lines.

A successful spring promotion of moth products in new foil packages by Click, Barrett and Zonite Corp's. "Larvex" was recently undertaken by Penn Fruit Co. in Philadelphia. Penn Fruit Co., which operates more than 30 of the best supermarkets in the Philadelphia area, recently used identical end displays in all of its chain of supermarkets to display and promote moth preventives. See photo at top right). The idea, according to William Pomerantz, the buyer for Penn Fruit, was extremely successful. It is believed that this is the first time such a display and promotion of moth preventives has been undertaken by a food chain.

Click para crystals and Barrett's "Polar" moth rings, flakes and balls in new foil wrapped packages of different colors to differentiate between products are shown in center and bottom photos at right.



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Aerosol Perfuming

By **R. A. Foresman and R. Pantaleoni***

Aerosol Consultant, van Ameringen-Haebler, Inc.

DUE to the increased impact of aerosol packages on the cosmetic market, it was felt that a basic study of aerosol perfuming should be undertaken and reported.

We contemplate that this program will be carried through on a continuing basis and that as various phases are concluded, new ones will be undertaken. This report constitutes only the preliminary findings of the investigation. It is worth noting here that at the time the work was initiated there was no indication of a long term shortage of "Freon 114,"** which has been considered the cosmetic "Freon."** As the shortage developed and became more acute and of apparent long term duration, we realized that a re-examination of the more available propellents was in order. This is underway, but has been started too recently for any results to be reported.

In order to carry out such a program, we early concluded that some limitations on the number of experimental variables for each phase would have to be imposed. The perfume components provided a potential infinite number of possibilities. The types and actual formulas of cosmetic products are without limit. Many propellents, pure or in combination, are in general use for various types of aerosols. The materials considered suitable for aerosol packages have recently been added to by introduction of the glass package. Last, the

conditions of storage should include reasonably normal warehouse conditions, as well as those at point of sale. Also, it was felt that an evaluation of accelerated storage test procedures should be considered.

In order to cut the test series to a reasonable size, the following variables were set:

Perfume components were limited to a total of 30—comprising 25 representatives of the principal chemical functional groups and five natural essential oils, chosen for their widespread usage in perfumes. The components used were:

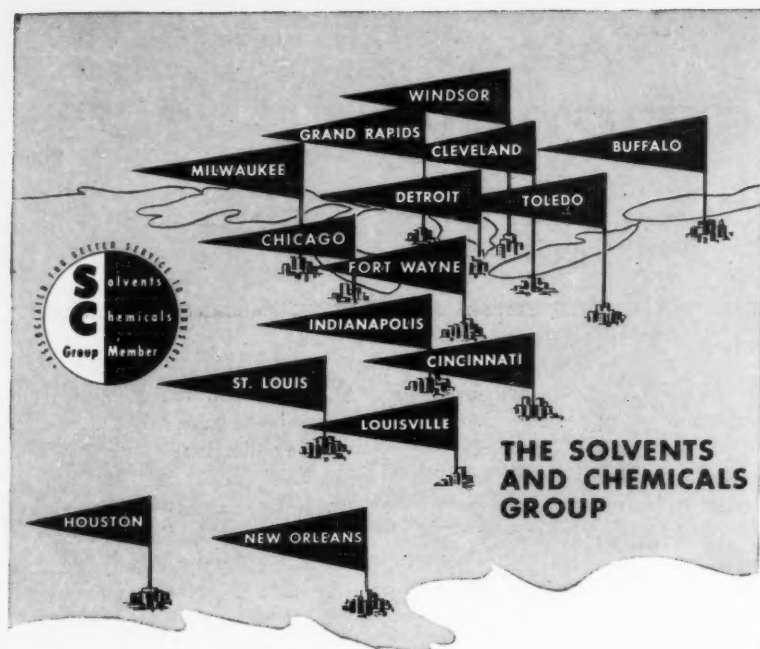
1. Hydroxycitronellal—a not too stable aldehyde
2. Phenyl ethyl alcohol coeur—a stable aromatic alcohol
3. Peach aldehyde coeur—a lactone
4. Amyl cinnamic aldehyde coeur—a stable aromatic aldehyde
5. Methyl diphenyl ether—a stable aromatic ether
6. Isoeugenol—a reactive substituted phenol which may discolor
7. Alpha ionone coeur—a stable aromatic ketone
8. Geraniol coeur—a stable unsaturated alcohol
9. Gamma methyl ionone—a stable aromatic ketone
10. Terpeneol—a terpene tertiary alcohol—generally stable
11. Cyclamal (Alpha methyl p-isopropyl phenyl propyl aldehyde)—an aldehyde subject to oxidation
12. Eugenol U. S. P.—a reactive substituted phenol which may discolor
13. Linalool coeur—a stable unsaturated alcohol
14. Methyl anthranilate—an ortho amino benzoic acid ester which may discolor
15. Anisic aldehyde
16. Amyl salicylate—a phenolic ester which discolors in the presence of ferric ions
17. Citral C. P.—a not too stable aldehyde
18. Phenyl acetaldehyde 100%—a not too stable aldehyde
19. Linalyl acetate 98%—an ester of an unsaturated alcohol
20. Geranium bourbon—an essential oil
21. Terpeneless petitgrain—a purified essential oil
22. Benzyl acetate—an aromatic ester
23. Petitgrain S. A.—an essential oil
24. Citronellyl acetate—an ester of an unsaturated alcohol
25. Lavender oil 40-42%—an essential oil
26. Methyl benzoate—an aromatic ester
27. Aldehyde C-10—an aliphatic aldehyde subject to oxidation
28. Bergamot natural—an essential oil
29. Pine needle Siberian—an essential oil
30. 10% Musk ambrette in diethyl phthalate—a nitro musk which discolors

The original stock of each oil was preserved in a single amber glass bottle and used to perfume all experimental samples throughout the test.

It was decided that only two cosmetic products would be used as bases. They were perfume cologne in two-ounce glass aerosol bottles

*Paper presented before the Scientific Section during the annual meeting of the Toilet Goods Association, Waldorf-Astoria Hotel, New York, May 13.

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TOLEDO, Jordan 0761
WINDSOR, Clearwater 2-0933

and foam shaving cream in six-ounce metal containers.***

The cologne concentrate was made up as follows:

Perfume	1 gm.
Water	14 gm.
SD 40 Ethanol	113 gm.

This formula is one that has been used with cologne aerosols in glass and it was felt it would serve as a generic type. It must be remembered that anhydrous systems are not unusual in aerosols and actually have much in their favor from the standpoint of chemical stability.

The shaving cream concentrate was made up as follows:

Triethanolamine Stearate	5.0%
Water	95.0%

This formula is not a finished one by any means, but offers the advantage of a single known material which is used as an ingredient in many of the commercial shave foams.

The propellents were limited to two—pure "Freon** 114" for the colognes and 40-60 Freon 12/114 for the shave foams. As was mentioned earlier, the use of the propellents in less critical supply than "Freon** 114" is being re-explored for cosmetic use.

In the case of the colognes, four packages of each perfume were packed as follows:

Cologne Concentrate	75%
"Freon** 114"	25%

Two packages of each perfume were packed the same as above, but less "Freon."***

In the case of the shave creams, two packages of each perfume were packed as follows:

Pressurized:

Shave Cream Concentrate (perfumed with 0.3% perfume oil)	93%
--	-----

Unpressurized:

"Freon** 12/114"	7%
Shave Cream Concentrate (perfumed with 0.3% perfume oil)	100%

It was felt that the room temperature storage samples of unpressurized cologne would be adequate.

(Turn to Page 165)

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***"Spray-Tainers" made by Crown Can Co., Philadelphia.

SHAVING CREAM

Room Temperature		Elevated Temperature		
Control Non- Pressurized Fresh Sample	Non- Pressurized	Non- Pressurized	Non- Pressurized	Non- Pressurized
1.			generally weaker	
2.			generally weaker	
3.				
4.			generally weaker	
5.				
6.			possible slight change with traces of vanillin	
7.			discoloration generally weaker	discoloration
8.			slight change less floral and weaker	
9.			less flowery generally weaker	
10.			generally weaker	
11.			generally weaker	
12.			slight discoloration	slight discoloration
13.				
14.				
15.				
16.			odor change not as nice	
17.		off odor	great discoloration off odor	
18.		weak flat in odor	slight off odor	
19.				sl. off odor
20.				
21.				
22.			substantial degradation of odor	
23.				
24.				
25.				
26.			noticeable degradation of odor	
27.			slight degradation of odor	appreciable degradation of odor— fatty
28.			not as sweet change in odor	
29.			weaker due to heat—soapy due to heat—soapy	
30.			slight change	

COLOGNES

Room Temperature			Elevated Temperature		
RC	RF	RFF	OC	OF	OFF
1.	not charac- teristic not as floral		character- istic		
2.					
3.					
4.					
5.	Ex.	Ex.		Ex.	Ex.
6.				indications of very slight oxid. —vanillin note	
7.	Ex.	Ex.	Ex.	Ex.	Ex.
8.					
9.	Ex.	Ex.	Ex.	Ex.	Ex.
10.				half evaporated	missing
11.	Ex.	Ex.	Ex.	Ex.	Ex.
12.					
13.					
14.		odor int. increased		odor int. increased	odor int. increased
15.					
16.					
17.		odor int. increased		odor int. increased	odor int. increased
18.	Ex.	Ex.	Ex.	Ex.	Ex.
19.		odor int. increased		odor int. increased	odor int. increased
20.					
21.					
22.	Ex.	Ex.	Ex.	Ex.	Ex.
23.	Ex.	Ex.	Ex.	Ex.	Ex.
24.					
25.	Ex.	Ex.	Ex.	Ex.	Ex.
26.	sl. benzalde- hyde note	Ex.	Ex.	Ex.	Ex.
27.	Ex.	Ex.	Ex.	Ex.	Ex.
28.					
29.	decreased sweetness turpentiney	decreased sweetness turpentiney		decreased sweetness turpentiney	decreased sweetness turpentiney
30.	Ex.	Ex.	Ex.	Ex.	Ex.

RC — Room Temperature Control — Unpressurized
 RF — " " " " Pressurized
 RFF — Duplicate Room Temperature Pressurized
 OC — Oven Storage Control — Unpressurized
 OF — " " " " Pressurized
 OFF — Duplicate Oven Storage Pressurized
 If odor exhibited no change, no notation was made in the table.
 Designation of Excellent (Ex) indicates excellent coverage.

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Table 4. Initial and residual effectiveness of various materials as synergists with compound 21/200 in beaker tests against body lice. Exposure 24 hours.

Ratio of synergist to toxicant 10:1.

Synergist No. 0-	Initial percent knock-down or kill with indicated concen- tration of compound 21/200			1 day	Percent knock-down or kill with 0.005% of compound 21/200 after —				
	0.005%	0.0025%	0.001%		9 days	13 days	20 days	23 days	27 days
8184	100	100	50	100	90	20	—	—	—
14250	100	95	10	100	100	100	100	100	75
18323	100	95	0	100	100	100	100	100	85
20091	100	100	0	100	100	100	95	45	—
20272	100	100	10	100	100	80	20	—	—
20313	100	100	70	100	100	100	100	85	25
20332	100	100	55	100	100	40	—	—	—
20337	100	100	25	100	100	95	55	—	—
16634	100	100	0	100	100	90	90	20	—
None: Compound									
21/200 alone	90	10	0	20	—	—	—	—	—
Untreated	0	0	0	0	0	0	0	0	0

Louse Powder...

(From Page 123)

caused by the synergists themselves was insignificant.

Patch Tests

TESTS with Potasan.—Ten of the synergists listed in table 1 and five additional ones were evaluated from a residual standpoint in tests whereby the materials were applied as powders to cloth patches. Each powder contained 0.25 percent of the synergist and 0.025 percent of Potasan. An average of the two tests made is shown in table 5.

All 15 compounds increased the insecticidal action of Potasan. Sulfoxide (0-16634) and 1,2-methylenedioxy-4-[2-(octylsulfonyl)propyl]benzene (0-18323) were the most effective. Some of the materials that were outstanding in the beaker tests, especially 5-butyl-5-ethyl-2-(3,4-methylenedioxyphenyl)-*m*-dioxane (0-20313), caused rather poor kill of lice in the patch tests.

In tests with the synergists alone at 0.25 percent, only one material, *alpha*-*tert*-butylpiperonyl chrysanthemumate (0-20309), caused as much as 25 percent knock-down or kill of lice.

Tests with compound 21/200.—Fifteen compounds were evaluated as synergists with compound

21/200 in patch tests against lice. Since compound 21/200 was slightly more toxic alone than Potasan, it was tested at 0.01 percent in combination with 0.1 percent of the candidate synergist. An average of the two replications made is shown in table 6.

The results indicate that compound 21/200 is somewhat less susceptible to synergistic action than is Potasan, although the tests as conducted are not directly compar-

able. Some increase in toxicity of compound 21/200 was caused by all the synergists tested. However, eight of the 15 materials failed to increase the toxicity of the phosphorus compound sufficiently to cause complete knock-down or kill of lice as fresh treatments. Sulfoxide (0-16634) and 1,2-methylenedioxy-4-[2-(octylsulfonyl)propyl]benzene (0-18323) proved the most effective, and *alpha*-amylpiperonyl chrysanthemu-

(Turn to Page 145)

Table 5. Residual effectiveness of Potasan at 0.025 percent in combination with 0.25 percent of the synergist in patch tests against body lice. Exposure 24 hours.

Synergist No. 0-	Percent knock-down or kill after —				
	1 day	3 days	5 days	7 days	10 days
14250	100	98	98	68	30
16634	100	100	100	100	98
18323	100	100	100	100	85
20003	100	98	93	58	25
20089	100	50	—	—	—
20091	98	60	—	—	—
20272	100	98	88	85	48
20309	100	100	98	73	53
20313	100	30	—	—	—
20332	100	85	60	—	—
20337	100	98	85	75	33
20412	98	70	—	—	—
20413	100	70	—	—	—
20414	100	98	83	60	—
20417	100	93	68	—	—
None:					
Potasan alone	75	33	33	13	—
Pyrophyllite alone	3	0	0	0	0
Untreated	3	0	0	0	0

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mate (0-20412) also gave long-lasting control.

Discussion

THE marked synergist action of piperonyl butoxide, sulfoxide, and related materials when used in combination with pyrethrum is well known. The discovery that the insecticidal activity of an organic compound, such as Potasan, is greatly increased in both initial kill and residual effectiveness may prove of great practical value in insect control. It may permit the use of lower concentrations of the insecticide without loss of effectiveness and thus provide a greater safety margin from the standpoint of mammalian toxicity. It may be especially significant in connection with the development of powders for the control of lice affecting man. However, toxicological studies will be required to determine whether the toxicity to man and animals of such combinations is increased to the same extent as shown for insects.

The knowledge that certain phosphorus compounds respond to the action of synergists may also aid

in investigations on their mode of action, particularly the synergistic phenomena. Several other organic phosphorus compounds have been tested to determine their insecticidal activity when used in combination with some of the more active synergists reported herein. The activity of parathion, malathion, EPN, and a few other phosphorus compounds was not increased to any marked degree or at all.

Summary

Laboratory tests were conducted with 22 materials as synergists with 4-methylumbelliferone *O,O*-diethyl thiophosphate (Potasan), 3-chloro-4-methylumbelliferone *O,O*-diethyl thiophosphate (Bayer compound 21/199), 3-chloro-4-methylumbelliferone *O,O*-dimethyl thiophosphate (Bayer compound 21/200), and certain other phosphorus compounds against the body louse, *Pediculus humanus humanus* L. The mixtures were tested as cloth impregnants and except compound 21/199, as powders applied to small cloth patches.

Most of the synergists in-

creased the initial insecticidal activity of the phosphorus compounds, some as much as 10 times. The duration of residual effectiveness of the toxicants was also increased markedly. Sulfoxide and 1,2-methylenedioxy-4-[2-(octylsulfonyl)propyl] benzene were the most effective synergists from an over-all standpoint. However, there was no synergist that proved the most effective in each type of test and/or with each of the phosphorus compounds tested. The most effective synergist with these compounds was ineffective with other phosphorus compounds, such as parathion, malathion, and EPN.

The discovery that certain phosphorus compounds respond to the action of synergists should not only prove of practical value in insect control but also aid in investigations of the mode of action of synergists.

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Table 6. Residual effectiveness of compound 21/200 at 0.01 percent in combination with 0.1 percent of the synergist in patch tests against body lice. Exposure 24 hours.

Synergist No. 0-	Percent knock-down or kill after —			
	24 initial hours	2 days	5 days	8 days
14250	98	78	63	—
20003	85	33	—	—
20089	93	73	53	—
20091	100	83	63	40
20272	98	88	65	40
20309	98	85	63	20
20313	88	75	68	55
20332	68	43	—	—
20337	98	88	63	7
20412	100	100	85	45
20413	100	98	83	40
20414	100	63	—	—
20417	100	98	65	30
16634	100	100	98	63
18323	100	100	98	95
None:				
Compound 21/200 alone	58	28	18	0
Pyrophyllite alone	15	10	0	3
Untreated	3	0	0	0

¹ Caused 60% knock-down or kill after 11 days.

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News

McClintock Mac-Lac Head

The election of Donald E. McClintock as president of Mac-Lac Co., New York, shellac im-



Donald E. McClintock

porters and refiners, was announced recently. Mr. McClintock, succeeds his late father, Ralph W. McClintock, who died early in May. Besides being president, Mr. McClintock continues to serve as treasurer, a post to which he was named last year. He has been with the firm, which is currently celebrating its 50th year, for the past 25 years.

Other officers of Mac-Lac chosen recently are: executive vice-president, James W. Byrnes; vice-president, Charles F. O'Malley; assistant vice-president, Philip H. Harris, and secretary, Henry E. Blanchford.

Simmons Chmn. Emeritus

The election of George L. Simmonds as chairman emeritus of U. S. Sanitary Specialties Corp., Chicago, was announced recently by the firm. Mr. Simmonds retired June 1 from active management of the company after 30 years of service. Mr. Simmonds, who is also a director of Union Asbestos & Rubber Co., was president of U. S. Sanitary Specialties Corp. for 15 years. Since 1947 he has served

as chairman of the board. William Jessop is currently president of U. S. Sanitary Specialties Corp.

Hollingshead Dividend

A regular quarterly dividend of 25 cents on the common stock, payable July 15, to stockholders of record June 30, 1954, was declared late last month by directors of R. M. Hollingshead Corp., Camden, N. J.

Miller Bill Near Signing

The Miller bill (H.R. 7175) for controlling the permissible amount of pesticidal residues on agricultural produce was passed by

U. S. Senate July 6 and is expected to go to the White House for the President's signature before Congress adjourns on July 31. The senate labor and public welfare committee voted recently a favorable report on the measure with an amendment authorizing the Food and Drug Administration to impose fees for its services performed under the law. A brief hearing on the bill by a subcommittee prompted the committee's favorable action.

Motel Show Set

The National Motel Show will be held at the Morrison Hotel, Chicago, November 1 through 3, 1954. Exhibit space is available to suppliers of motel and tourist court equipment and services.

Hollingshead Building on West Coast

CONSTRUCTION of a 60,000 square foot Sunnyvale, Calif. branch of R. M. Hollingshead Corp., Camden, N. J. chemical specialty manufacturers, got under way June 10.

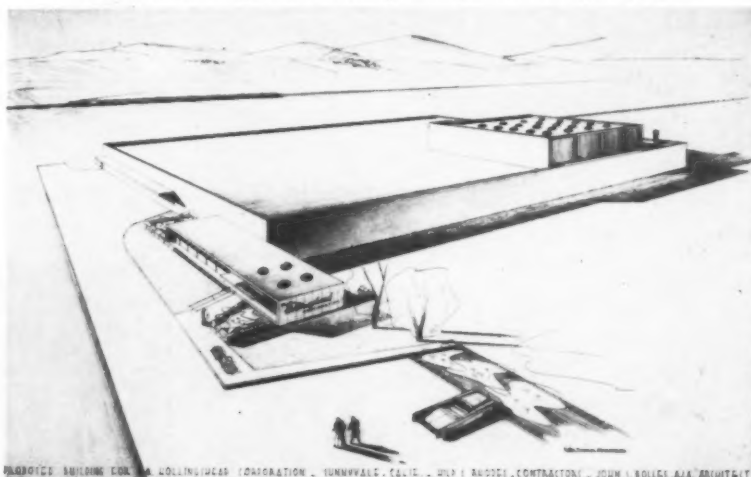
Occupying a 10 acre site on Kifer Road, it is expected that the modern \$1,000,000 plant will be in operation by January 1, 1955, and will employ approximately 50 persons.

The new Hollingshead branch will manufacture the principal items in its varied line of chemical prod-

ucts for use in the automotive, household, industrial, government and aircraft fields. Products such as floor waxes, car cleaners and waxes, hydraulic fluids and corrosion preventives are examples of the items that will be manufactured for the Western market.

The Sunnyvale plant is the 66 years-old company's first step in a series of plant expansions. It will service the eleven Western states. The ten acre site will permit eventual doubling of the size of the planned facilities and rail service

Architect's drawing of new Hollingshead plant at Sunnyvale, Calif.



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to the new plant will be provided by the Southern Pacific.

In pointing out the advantages of the new location, R. M. Hollingshead, Jr., Chairman of the Board of the R. M. Hollingshead Corporation, stated that the West is the fastest growing market in the country and the San Francisco Bay Area offers the most central location in the Western market.

The company's West Coast warehouse and offices, now located in San Francisco, will be transferred to the new location upon completion of the building. R. M. Hollingshead, III will be the general manager of West coast operations.

Design and construction of the new plant is being handled by two Bay Area firms, John S. Bolles, Architects, and Hilp & Rhodes, Contractors, both of San Francisco.

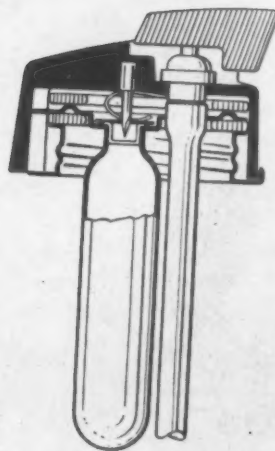
★ New Pressure Spray Unit

The development of a new type pressurized spray container for dispensing chemical specialties ranging from moth sprays to cosmetics, was announced last month by Wolco Products, Inc., Hartford, Conn. The new pressurized container consists of three units: can or other type container; a separate plastic screw-on cap which houses the mechanism, and a bullet shaped metal pellet containing the propellant, carbon dioxide gas.

According to the manufacturer, the new development makes available to practically all products the advantages of a low cost, pressure-spray container. In most cases the manufacturer can continue to use his present type containers and his regular filling line.

Besides claiming economies in production and marketing another feature of the new container is the reuse aspect. Consumers can buy sprays, deodorants, insecticides, etc. in bulk and refill their own containers as required. Each pellet of CO₂ is sufficient to empty one full container. A new pellet may be set inside the cap by the users, and pellets are replaceable at low cost.

The president of Wolco



Low cost Wolco pressure-spray can requires no special filling equipment. The enlarged cutaway section shows renewable pellet containing gas and mechanism for spraying.

Products, Inc., in 1948 organized The Wolcott Company, the principal product of which was "Easy-

Off Oven Cleaner." The company reorganized in January of this year, when it became Wolco Products.

New Insecticide Standard

A revision of Household Insecticide (Liquid Spray Type), Commercial Standard CS72-38, has been recommended by the standing committee of the industry and was circulated to the trade for written acceptance recently by the Commodity Standards Division, U. S. Department of Commerce.

Household Insecticide, Commercial Standard CS72-38, was adopted by the industry in 1938, and has been widely used since that time in guaranteeing the quality of flysprays. The revision recommended by the standing committee changes the title to Household Insecticide (Liquid Space Spray Type for Flying Insects) to distinguish the product from other types of insecticides produced for use against crawling insects.

The standard covers biological, physical, and chemical properties and methods of test of liquid space sprays. Such sprays contain one or more insecticidal ingredients dissolved in flyspray base oil suitable for household or industrial use. The killing power of the spray is determined by the Official Peet-

Grady Method of the Chemical Specialties Manufacturers' Association, Inc.

Copies of the recommended revision, TS-5214, may be obtained while the supply lasts by addressing a request to F. W. Reynolds, Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.

★ Chlordane Ant Control

A four-page folder "How Chlordane Controls Ants," was issued recently by Velsicol Corp., Chicago. Where to apply chlordane for ant control and tables of use concentrations of finished formulation are contained in the folder, which is available by writing Velsicol at 330 E. Grand Ave., Chicago 11, or 100 E. 42nd St., New York.

★ Klumph to Florida

E. W. Klumph, who has represented Onyx Oil & Chemical Co., Jersey City, N. J., in North Carolina, with headquarters in Charlotte, for the past 20 years has been transferred to Florida it was announced last month.

New Stair Treads

The introduction of a new, heavy duty, institutional type "No-Trax" chevron stair tread that comes in six marbelized color combinations was announced recently by Superior Rubber Manufacturing Co., Chicago. The new type stair tread comes in widths of 36 and 48 inches by 3/16ths by 11 inches. Color combinations include: black with white, brown with ochre, mahogany with white and red, green with black

New heavy duty, institutional type "No-Trax" chevron stair tread of Superior Rubber Co., Chicago.

and white, terra cotta (red) with black and white, and gray with black and white.



Varley Jobber Contest

A nation-wide contest to promote sales of their "Apple Blossom Deodorant - Glyco - Mist Sanitizer" will run from Sept. 1 to Dec. 31, it was announced last month by James Varley & Sons, Inc., St. Louis. The contest, in which sanitary supply jobber salesmen can participate, will feature hundreds of prizes, including a two-weeks, all-expense luxury tour to Havana or Miami. Other prizes include television sets, "Polaroid" cameras, etc. This is believed to be the first time such a contest has been conducted for all jobber salesmen, regardless of whether they are selling under the manufacturer's brand or under private label.

"Diazinon" fly bait of Geigy Agricultural Chemicals vision of Geigy Chemical Corp., New York, has reduced fly populations in unscreened barns by as much as 98 percent, research workers at the U. S. Department of Agriculture at Orlando, Fla., found, the company said recently. These results were obtained with one percent "Diazinon" in sugar. Below is a photo of ready to use one pound package.




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Canada Insecticide Vaporizer Standard

A STANDARD for continuous type insecticide vaporizers was published recently by the Canadian Standards Association and is now available for 75 cents. The specifications were prepared by the Committee on Continuous Insecticide Vaporizers and were formally approved by the committee and the Technical Council. Copies of the standard, Z129-1954, may be obtained from the Canadian Standards Association, National Research Building, Ottawa, Ontario.

Following the foreword, there are six sections plus three appendices. The sections cover: scope, service conditions, definitions, specification details, markings and tests and testing methods.

The maximum lindane output, as covered in section 4, specification details, shall not exceed one gram per 24 hours. The maximum output per cubic foot of treated space set in the specification is 0.00066 gram per 24 hours with 24

Bronze plaque of Carie C. Conway, chairman of the executive committee of Continental Can Co., New York, was recently unveiled in Deventer, Holland, at the new research laboratory of Thomaseen and Drijver, Holland's largest manufacturer of metal containers. The plaque was unveiled by Mrs. Conway during the dedication ceremony for the new laboratory which has been named in honor of her husband, former president and board chairman of Continental.



hour average air changes of 1.5 or greater. In addition, the specification calls for the vaporizer to halt operation within 15 minutes of failure of head control mechanism.

The specification further provides that "a vaporizer shall be tested and used only with the particular brand of lindane which has been licensed for use in that vaporizer."

Lindane is the only insecticide covered in the specification for use in vaporizers and is defined as "at least 99.0 percent gamma isomer of hexachlorocyclohexane.

The cup in which the insecticide is placed is to be inert to the insecticide and aluminum and steel, whether plated or otherwise protected, may not be used unless shown by special investigation to be acceptable.

In the subsection on installa-

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tion details the standard states that vaporizers may not be used in homes. In public buildings and commercial establishments they may be installed where occupants are exposed for periods not exceeding a working day. Vaporizers may be installed in food establishments where exposure of food would not be in excess of eight hours in 24, provided that exposure does not cause contamination of food in excess of 0.5 parts per million. Vaporizers cannot be mounted less than three feet from ceilings and must be sufficiently distant from the nearest vertical surfaces to avoid condensation of the lindane vapor on such surfaces.

The Committee on Continuous Insecticide Vaporizers is composed of representatives of industry, government agencies, the Canadian Pest Control Operators Assn., Consumers Research Laboratories of Toronto and the Canadian Standards Association. F. F. Winberg of American Aerovap, Inc., New York, served as an associate and D. P. Williamson of De-Fly-Er of Canada, Ltd., Toronto also served.

★ **Hercules Vinsol Booklet**

A new technical booklet which provides a wide range of data relative to the use of "Vinsol" resin as a low-cost component of Buna-N, vinyl and other type adhesives is now available from Hercules Powder Co., Wilmington, Del.

"Vinsol" resin is a hard, brittle, high-melting thermoplastic material derived from southern pine wood. The resin is said to be extremely compatible with a variety of resins and film-formers.

Two sections of the booklet cover product applications.

★ **Koppers' N. Y. Office Moves**

The New York consolidated sales office of Koppers Co., Pittsburgh, Pa., moved last month to new quarters at 430 Park Avenue. The firm's chemical, tar products, wood preserving, and metal products divisions share the 7,000 square feet of space leased for a period of 10 years.

Owens-Ill. Names Kohl

Arthur R. Kohl, manager of the household chemical division of Owens-Illinois Glass Co., Toledo,



Arthur R. Kohl

recently assumed the added duties of manager of the toiletry and cosmetic division, it was announced by S. F. Davis, division vice-president and general sales manager. Mr. Kohl, who has been with Owens-Illinois since 1921, served as sales manager of the package division prior to his appointment as head of the household and chemical division in 1946.

★ **Thurman to Union Bay**

Union Bay State Chemical Co., Cambridge, Mass., recently announced the appointment of George W. Thurman as a technical representative in the Chicago area for its industrial division. Mr. Thurman serves as consultant and sales representative for the North Central territory which includes Wisconsin, northern Illinois, northern Indiana, and northern Michigan.

Letters

(From Page 33)

"I regret I was not aware of the Snell report on wax and vinyl flooring. My method for obtaining information on each of the materials mentioned was to contact three architects and ask them the advantages and disadvantages of each of the materials involved. It seemed to me that an architect, a man who knows and uses building materials and is subject to no commercial pressure

which might make him partial to any particular type—was best equipped to give me a reliable and objective answer. All three mentioned the fact that vinyl was a material which did not require waxing.

"I am glad you called this misconception to my attention, and I can assure you that we will avoid a similar statement in the future."

A similar letter protesting the use of the words "requires no waxing" was sent to the *New York Times* by H. W. Hamilton, secretary of the Chemical Specialties Manufacturers Association. Excerpts of Mr. Hamilton's letter follow:

"We are aware that certain manufacturers claim that their products do not have to be waxed. Of course, no floor "has" to be waxed, but if you want it to have gloss, to resist tiny scratches that make it dull, and to keep it easy to clean you should wax vinyls, just as you wax linoleum, asphalt tile, rubber and other types of flooring. Vinyl floors are tough, but not so tough they can go it alone.

"I think you will find that although a few flooring manufacturers say their product needs no wax, a larger number advise waxing for higher gloss and some unequivocally state that it needs wax for the same reasons that other floors do.

"Attached you will find two reports on this subject made by Foster D. Snell, Inc., New York consulting chemists-engineers. The Chemical Specialties Manufacturers Association sponsored these studies in order that the true facts might be established. These reports were based on extensive laboratory and floor service tests. There is other voluminous testimony in support of waxing vinyls.

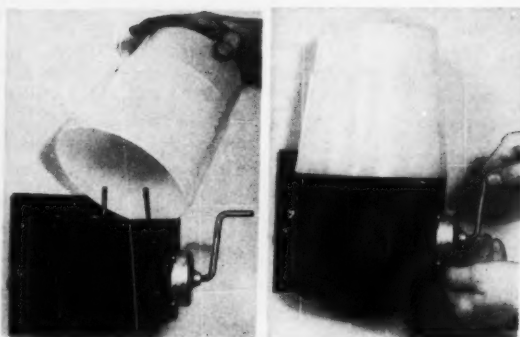
"A survey of flooring dealers shows that more than 80 percent disagree with the no wax claim. The trade magazine, *Hotel Management* in its April issue carried an article by an expert on floors who wrote: "With more than thirty years of experience with floors and their maintenance, we hold to the opinion that vinyl floors, like other floors, are best maintained by waxing."

"At least one major home service magazine refuses to accept vinyl flooring advertising that makes the claim that it requires no wax."

The fact that our association has sought to resolve this controversial issue through independent investigation will indicate to you that we are vitally interested in the matter and I hope you won't mind by writing to you. Should you be further interested I would be glad to hear from you."

Not much we can add to that, except to say that the work of publicizing the waxing of vinyl floors report must go on. In case you missed our editorial on the subject see page 31. Ed.

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Table 12. Effect of trisodium phosphate on sanitizing action of 200 ppm benzalkonium chloride in synthetic hard water (450 ppm) and aluminum on *E. coli* 198 at 25°C.
87 x 10⁶ Cells/cc.

Al ppm	TSP mg/cc	Number Surviving Exposure for:			pH
		30 sec.	60 sec.	120 sec.	
0	0	100	0	0	7.95
1	0	200	30	0	7.8
2.5	0	30	0	0	7.65
5.0	0	70	0	0	7.4
0	2	0	0	0	10.4
1	2	0	0	0	10.35
2.5	2	0	0	0	10.25
5.0	2	0	0	0	10.25

Quaternaries

(From Page 136)

be demonstrated at 30 seconds exposure to 200 p.p.m. benzalkonium chloride in synthetic hard water of 450 p.p.m. hardness and/or up to 5 p.p.m. iron or aluminum when 1-2 mg/cc of sodium ethylenediamine tetra acetate or trisodium phosphate were present in the medication mixture.

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1. Weber, G. R. and Black, L. A.: *J. Amer. Public Health Ass.*, 38, 1405 (1948).
2. Allport, N. L., Personal Communication.
3. Sternberg, G. N., *A Manual of Bacteriology*, New York 1893.

Mrs. Ernest Cooper Dies

Mrs. Ernest Cooper, wife of Ernest Cooper of Clarke Sanding Machine Co., Muskegon, Mich., and a director of the National Sanitary Supply Association, died June 3.

Wax Polish Specs.

Proposed Federal Specification P-P-554 for furniture wax polish was released recently by the General Services Administration, Washington, D. C. It applies to polish intended primarily for the cleaning and polishing of furniture and other finished wood and metal surfaces.

The liquid furniture polish is to be a stable system of wax and volatile petroleum hydrocarbons

suitably emulsified in water. The emulsion shall be a free flowing fluid that can readily be applied with a cotton cloth and easily spread. It is to be free from abrasives and from objectionable odor. Non-volatile matter shall be not less than five percent nor more than seven percent by weight. It shall be essentially solid wax type materials and contain no oils, maximum ash content to be 0.5 percent, softening point 75°C, and needle penetration 18.0 x 0.1 mm. Volatile matter shall consist of water and a volatile petroleum hydrocarbon. The latter shall be not less than 30 percent nor more than 40 percent by weight of the sample received. The petroleum hydrocarbon shall have a minimum flash point of 29.5°C and a distillation range from 221°C to 140°C. pH is to fall between the limits of 7.5 and 9.5 when tested as specified. Full details for inspection and test procedures are supplied.

Dr. Reveley Joins Rayette

Dr. William G. Reveley, formerly director of exploratory research for National Aniline Division of Allied Chemical and Dye Corp., New York, has been appointed assistant director of research for Rayette, Inc., St. Paul, Minn., it was announced by Mark Arend, president. Dr. Reveley is responsible for product development and chemical research for Raymond Laboratories, Inc., a subsidiary of Rayette active in chemical manufacturing, as well as for Rayette, Inc.

Lab Report on Cleaner

New sales records are being made for "Neutra-Sheen," a neutral cleaner of Buckingham Wax Co., Long Island City, N. Y., it was announced recently by Allan Greene, sales manager. Because of intensified interest lately in the product, Buckingham recently issued a laboratory release (No. 20) on the cleaner. It is listed as an anti-slip floor treatment by the Underwriters' Laboratories and carries the seal of approval of the Rubber Flooring Manufacturers' Assn. Recommended for use on rubber tile, linoleum, asphalt tile, wood floors, woodwork in general, as well as terrazzo, porcelain tile and cement, the product is also effective on painted, varnished and enameled surfaces. Floors and similar surfaces require about four ounces of "Neutra-Sheen" to a gallon of either hot or cold water.

Stauffer Names Reichard

M. Dirck Reichard has been appointed manager of agricultural sales for the northeastern territory by Stauffer Chemical Co., New York, it was announced recently by John H. Kennedy, sales manager, eastern agricultural chemicals division. Mr. Reichard, formerly associated with Shell Chemical Corp., New York, joined Stauffer early in 1953.

Atlas Aids Students

Eight students of chemistry, engineering, and physics each received \$1,000 scholarships to be applied toward their senior college year, it was announced last month by Ralph K. Gottshall, president of Atlas Powder Co., Wilmington, Del. In addition to the \$1,000 grant, each of the winners has a chance of gaining practical experience this summer by employment in one of Atlas' plants or research laboratories. The eight were chosen from a group of 20 who had spent two days in Wilmington being interviewed and visiting the firm's central research laboratories and chemical plant.

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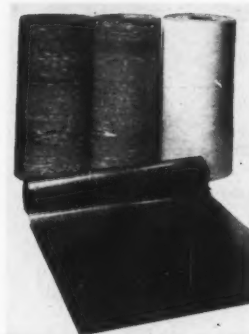
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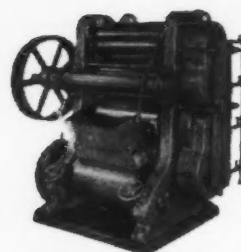
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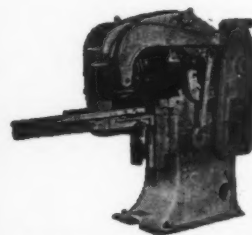
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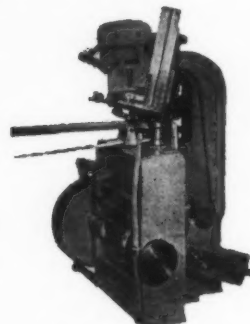
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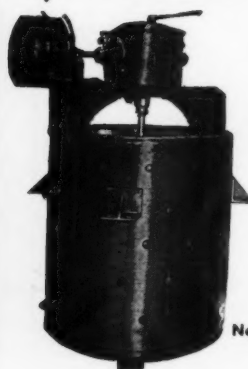
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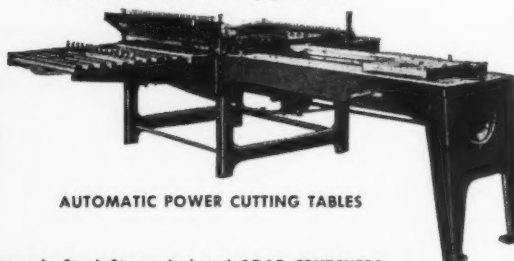
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Waxes, Sales-Purchasing: Vegetable wax — raw materials for chemical specialties industry. Contacts varied. Desires greater challenge with future not necessarily same line. Experience all phases, import to mfg. Administrative background. College graduate. Prefer New York area. Address Box 239, c/o *Soap*.

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Business Opportunity: Established chemical mfg. company interested in securing additional working capital or will consider merger with company seeking Philadelphia mfg. facilities. Address Box 233, c/o *Soap*.

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Miscellaneous

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Wanted: Complete soap or process chemical plants and machinery including kettles, frames, crutchers, pulverizers, cooling rolls, chip dryers, plodders, cutting tables, evaporators, packaging units, automatic soap presses, mixers, stainless steel tanks. P. O. Box 1351, Church St. Sta., New York 8, N. Y.

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Announcement: Completely new, up-to-date book, **HANDBOOK of PEST CONTROL** by Mallis, for sale. See page 102.

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For Sale

to 6000 lb. crutchers; 12" to 42" filter presses; powder mixers; paste and liquid mixers; Rotex screens; Hammer mills; soap frames; jacketed kettles; pumps; agitators; gluer-sealers, etc. Ask us to quote — Send us your list of surplus machines or plants. Consolidated Products Co., Inc., 59 Garden Street, Hoboken, New Jersey. Tel: HO 3-4425. N. Y. Tel: BA 7-0600.

For Sale: By I. E. Newman, 5602 Blackstone Ave. Chicago, Ill. Jones automatic laundry & toilet soap presses; 1500 lb. to 6000 lb. crutchers; 10" plodder; Automatic cutting table; Type S wrapper; Filter presses; Powder mixers, etc.

Standard Reference Books:
See page 118

For Sale: Allbright-Nell 4' x 9' chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-roll W. C. 12" x 36" steel mill. Houchin 8½" x 16" 3-roll and 18" x 30" 4-roll Granite Stone Mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Empire State foot presses. Soap frames. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" x 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, Grinders, Hammer mills. Colloid mills. Three-roll steel mills 8" x 22" to 16" x 40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Company, 107-8th St. Brooklyn 15, N. Y. STerling 8-1944.

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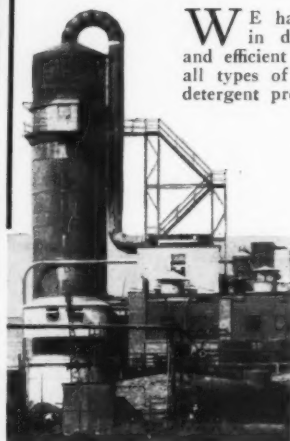
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MAC NAIR-DORLAND COMPANY

254 W. 31st Street

New York 1, N. Y.

Soap Perfuming

(From Page 36)

indicates low utility while a low designation suggests that the material can be employed in compounding. From the study will also appear suggestions for the most appropriate fragrance types. A further advantage is that the knowledge of perfume material behavior facilitates obtaining a stable balance of contrasting notes with maximum simplicity of formulation. The manner of use of the proven materials is largely the exercise of the perfumers art and will be in accord with the individual style of formulating.

When the finished perfume has been developed, a thorough testing program should be undertaken to insure stability of the blend. This includes observation of the effect of storage under widely varying conditions of temperature and humidity. Examination of odor under probable use conditions is also important since here one may discover whether incompatibility exists with any common home odors.

The use of accelerated aging both for appraisal of the worth of single materials and for finished product behavior may be objected to on the basis of lack of conformity with normal aging. Our experience is that it tends to be harsher than normal aging but that it does provide a method for rapidly estimating performance.

The application of the test method to single materials in bar or toilet soap is more tedious because of the time required for incorporation. Accordingly, it is not usually employed unless continuing difficulty in formulating a suitable fragrance exists because of a pronounced stock odor. When considered necessary each odorant can be used at 0.5% which is well above the threshold level for the average valuable raw material. Milling and plodding into bar form are necessary. Approximation to normal behavior is obtainable only if the

bars are of sufficient size to simulate normal rate of moisture loss and evolution of perfume during washing.

Before closing, a few remarks appear in order on the relationship of cost and availability to perfuming of soaps and detergents. Since margins of profit within the soap-detergent industry are low, emphasis must be placed on obtaining maximum value from the raw materials which are employed in perfumery. Accordingly, there is attraction to those aromatic materials with maximum fragrance value and lowest cost. The perfumer is further concerned with availability and stability of price. It is because of these two factors that the trend toward wider use of aromatic chemicals in detergent perfumery is likely to continue. In the competition of natural and synthetic materials we find on the one hand a picture of wide fluctuations in cost and supply for many essential oils and on the other stability and more ready availability. The demand for stability is evident even in natural product usage where essential oils whose prices tend to be steady enjoy constant or expanding use while use is declining for some oils which have exhibited large fluctuation. It is appropriate to commend the manufacturers of aromatic chemicals for their development programs which have produced both improvement in odor quality and many new synthetic odorants.

— * —

New Emulsol Wax

A new high melting point fatty amide trade named "Emulsol MAS" is described in technical bulletin No. 40 released recently by Emulsol Corp., Chicago. Said to be relatively non-toxic and non-irritating, this high titer wax is suggested for use as an opacifier in shampoos and other specialties, as an ingredient of baking pan grease compounds and of waterproof and water repellent compounds, and as a partial or total replacement of vegetable waxes in polishes.

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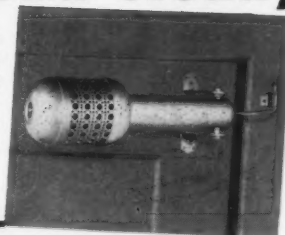
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Aerosol Perfume

(From Page 140)

quate as controls since the behavior of all of the odor representatives in normal colognes is known. However, as a control for the shave cream odor comparisons, fresh unpressurized shave cream concentrate perfume from the original perfume oil stocks was made up at the time of the odor evaluation—this eliminated the possibility of overtones of odor from the soap being mistaken for deteriorative changes in the perfume.

All variables were stored at room temperature or slightly below for the first two months of the test. At that time all variables were halved and one-half stored at 130°F. for the final month of this reporting period. This offers the advantage of direct comparison of deteriorative changes in odor between normal storage samples and accelerated storage samples. The samples were evaluated olfactorily by three persons in a clean atmosphere after cooling to room temperature. The colognes were sprayed onto cleansing tissue which was odorless. The shave creams were dispensed in quantities approximating a single normal use onto the same tissue. In the course of time it is hoped that correlation of accelerated test results and actual shelf life can be achieved.

Results on Colognes

1. The odor of the propellant was noticeable initially in the colognes made up with ingredients of low odor intensity.
2. The propellant had an unfavorable effect on the odor of hydroxycitronellal stored at room temperature.
3. Some of the cologne odors exhibited surprisingly strong odor intensity—apparently a permanent change. The explanation of this is possibly that azeotropic mixtures are formed between final trace quantities of the propellant and the

perfume principle which yield a more volatile perfume with correspondingly higher odor intensity. Methyl diphenyl ether in particular exhibited this characteristic.

4. One of the elevated temperature storage samples of pressurized isoeugenol showed a vanillin like sweetness not observed in the other samples. This is considered significant in view of the fact that the same effect was picked up in the shave cream samples.
5. Methyl anthranilate, citral and linalyl acetate all exhibited an apparent initial intensity of odor greater than non-pressurized samples. The explanation for this is in general the same as the permanent intensity increase mentioned earlier.
6. Methyl benzoate is not entirely stable as a pressurized cologne—one of the pressurized room temperature samples developed a benzaldehyde-like odor.
7. Pine needle Siberian developed a turpentine like note in the pressurized samples both at room temperature and elevated temperature.

Results on Shave Cream

1. During the period of room temperature storage 28 out of 30 perfumes retained their original odor in both pressurized and unpressurized packages.
2. Citral is unstable at room temperature in the pressurized shave cream system.
3. Phenyl acetaldehyde is unstable at room temperature in the pressurized shave cream system.
4. Many of the samples stored at elevated temperatures, exhibited changes that were apparently caused more by the temperature than by the propellant since in practically every case both the pressurized and unpressurized samples exhibited the same type of deterioration. Three samples which exhibited

a major degradation of odor are benzyl acetate, methyl benzoate and aldehyde C-10. Inasmuch as the degradation occurred in both the pressurized and non pressurized samples, it is apparently due to the effect of the shaving cream at elevated temperature on the perfume chemicals.

5. Three perfume chemicals exhibited appreciable discoloration of both pressurized and non-pressurized samples. They are alpha ionone coeur, eugenol U. S. P. and citral C. P.

While it is felt that the high temperature storage may have induced changes which would never occur in normal storage, we are carrying on the room temperature storage samples and will evaluate them from time to time in an effort to develop correlation if it exists, between elevated temperature deterioration over short periods of time as a test procedure, with normal deterioration occurring as a simple function of time.

— ★ —

Dow Para Folder

The properties and specifications of "Paradow," paradichlorobenzene produced by Dow Chemical Co., Midland, Mich., are listed in a folder issued recently by Dow. Para for control of clothes moths, mildew, peach tree borer, as well as for deodorant blocks and as an agricultural insecticide is covered in the folder.

Dow also announced recently the issuance of folders on its "Methocel" thickener, emulsion stabilizer and suspending agent. Properties, specifications and viscosity range are given in the folder. A similar folder on its line of soda ash was issued at the same time.

A 24-page, 8½ x 11 inch booklet on its line of ethanolamines (mono, di and tri) has also been made available recently by Dow. The use of the ethanolamines in various types of soaps and chemical specialties is described in the booklet.

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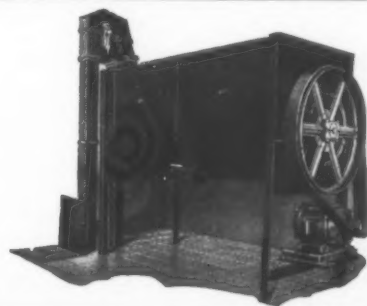
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Tale Ends

JUST when we thought this thing was beginning to die down, along come the Varleys of St. Louis with a "win all expense vacation for two people in beautiful, sunny Havana... or Miami" next winter. No jingle contest this. The Varleys write their own jingles. This is a sales contest, the sanitary supply salesman anywhere in the country who sells the most Glyco-Mist between next Sept. 1 and the end of the year being the lucky winner. Easy to enter! Easy to win! Or so the Varleys say. But if you don't win the all-expense vacation to sunny Havana, you may come in for a television set, radio, camera, what-not. Hold your hats, kids, here we go again!

While some of the dermatologists are screaming that too many baths ruin the skin, we have just found a statistic which recently came out of Germany. According to Dr. Karlheinz Wagner in FACHDROGERIE, only one out of every five apartments in Germany is equipped with a private bathroom. This lack should not be construed as the absence of a luxury, but rather as a deficiency in preventive hygiene, according to Dr. Wagner. He stresses that a bath is not a luxury at all, as many people believe, but an important factor in hygiene. So, go ahead and take a bath if you want one, gentle reader. It's not as fraught with danger as some doctors try to make out.

Imagine having the nerve to put a fly swatter on the market to retail at \$3.95! When you can buy a can of aerosol or liquid insect spray for less than a dollar. Seems silly,—but this is no ordinary five-and-dime type fly swatter. This one is embroidered in bright colored yarn "with a sequin decorated paddle and a tasseled handle," and is available in a wide variety of colors including pink, blue and lavender. The seller suggests that one be bought in proper color for each room of the house. In fact, the marketer mentions, these swatters are so gorgeous that the bugs literally battle to be swatted by them. We wonder how many he has sold so far at \$3.95 per each!

Yearly damage by bugs and weeds was recently estimated by J. Earl Coke, Asst. Secy. of Agriculture, at about thirteen billion dollars per annum which even in Washington, D. C. is a lot of dough. At the same time, Dr. E. F. Knipping, USDA widely known authority on bugs, stated that there are between 500 and 600 kinds of insects in America alone which do damage and cost us plenty, not counting just the nuisance bugs which are annoying but don't eat our spinach or the seat out of Uncle Joe's pants. And the bugs are gaining on us men and event-

ually will take over. Nice future to look forward to, but we must be factual in our reporting.

Up to now, we had hesitated to mention it, but maybe the wound has healed, - at least in part. They tell us that Bill Weed, Niagara Alkali V.P. and acknowledged gin rummy champ of the chemical world was really cut to the quick at the CSMA meeting in Cincinnati in May. Russ Young, prez of Davies-Young and by his own admission strictly minor league in gin rummy, really took Senor Weed apart in a series of gin games. "It wasn't the money, it was the humiliation," said Weed. "Oh, yeah?" said Young. Also we hear that one Albert Selig, Atlanta gin shark, is on the loose in Europe. Warning to all European gin players!

Joe Gumshoe, our grapevine reporter, who recently made a secret investiga-

tion of the pyrethrum situation, tells us that the price of pyrethrum extract and other pyrethrum products will move upward come October or November. Last January, the price of pyrethrum products dropped rather sharply in anticipation of a decline in the price of pyrethrum flowers in East Africa. This latter did not materialize. The Mau Mau problem in Kenya continues to be a disturbing factor, he hears. Anyway, they say the next move of prices in the U. S. will be upward.

Remember that 32 page government booklet, "Tools for Food Preparation and Dishwashing," which Pres. Eisenhower blistered in a campaign speech back in 1952 as a complete waste of public money? Well, the government has had to order more of them printed up. After the booklet was damned as an example of shameful waste, the demand grew about 50% overnight. In 1953, over 21,000 of them were sent out by the government and the demand is still going strong. Probably curiosity. But that does not alter the fact that what Gen. Eisenhower said about the thing in 1952 is still 100% correct!

Coverage....



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